ANNUAL REPORT

SAN FRANCISCO
INDUSTRIAL WASTE PROGRAM
FOR
CALENDAR YEAR - 1973

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CITY ENGINEER

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FOREWARD

San Francisco's industrial community is not characterized by manufacturing activity that has long been associated with heavy water pollution practices such as; iron and steel manufacturing, paper and related product production, and chemical manufacturing. Nevertheless, the City's industrial community does contribute significantly to the total water pollution abatement problem and in the face of increasingly stringent discharge requirements placed upon the City, plays a role of growing significance.

CHAPTER I INTRODUCTION

This document is the annual Progress Report of the San Francisco Industrial Waste Program and is intended to provide to the citizens of San Francisco, their elected officials, and concerned public officials, pertinent information regarding the Industrial Waste Program during calendar year 1973. Additionally, this document is intended to fulfill the requirements of the following guidelines, and agency promulgations:

- The California State Water Resources Control Board, "Project Report Guidelines".
- The State of California, Regional Water Quality Control Board, San Francisco Bay Region, Resolution No. 73-54; which requires the City and County of San Francisco to provide to the Regional Board an annual Progress Report on implementation of the Industrial Waste Program.

Information presented herein should be helpful to industrial decision makers in determining immediate and future resource commitments necessary for compliance with San Francisco's Industrial Waste Ordinance, and forthcoming industrial pretreatment requirements currently being developed by the Federal Environmental Protection Agency (EPA).

Widespread concern regarding the environmental consequences of unrestricted industrial waste discharges, has led to the

development of regulations and guidelines at the Federal, State, and local level.

These regulations prohibit the discharge of some pollutants, limit the discharge quantity of others, and provide for payment by industry of the increased costs realized by publicly owned treatment works to achieve reliable removal of certain sewage constituents which are industrial in origin.

The San Francisco Industrial Waste Program seeks to implement the objectives of these regulations by:

- Identifying industrial dischargers;
- Inspection of dischargers' wastewater streams;
- Determining dischargers' Fair share cost or the need to prohibit certain discharges;
- Collections of "Fair share" treatment facility costs, and other fees, and charges.

Widespread dissemination of this document will assist the community in understanding the problems associated with Industrial pollution and San Francisco's solution to them.

Chapter II presents a historical review of the Industrial Waste Program up to December 31, 1972 and Chapter III discusses activities during the calendar year 1973. An explanation of revenue sources and distribution is contained in Chapter IV,

and Chapter V projects anticipated future program activities, particularly for the year 1974.

Chapter II Historical Review

The need for an industrial waste program evolved from Federal, State and local efforts to upgrade water quality of the receiving waters that effluent from municipal treatment plants discharged into. The federal government's program is administered by the Environmental Protection Agency (EPA) which is responsible for the implementation of the Federal Water Pollution Control Act of 1972. (PL 92-500 as amended). This law has by far the greatest direct impact on industry because it includes provisions which; prohibit the discharge of specified toxic substances, limits the concentration of specific pollutants from industry that may be discharged into a municipal system, establishes a pretreatment requirement on certain industry categories, and requires municipalities to obtain a permit for the disposal of all wastes including treated effluent to the nation's navigable waterways.

Compliance with the conditions of this permit will necessitate additional limitations of certain industrial discharges.

The State program is administered by the State Water Resources Control Board which establishes policies that are the basis for the water quality requirements imposed upon dischargers by one of the arms, the Regional Water Quality Control Boards.

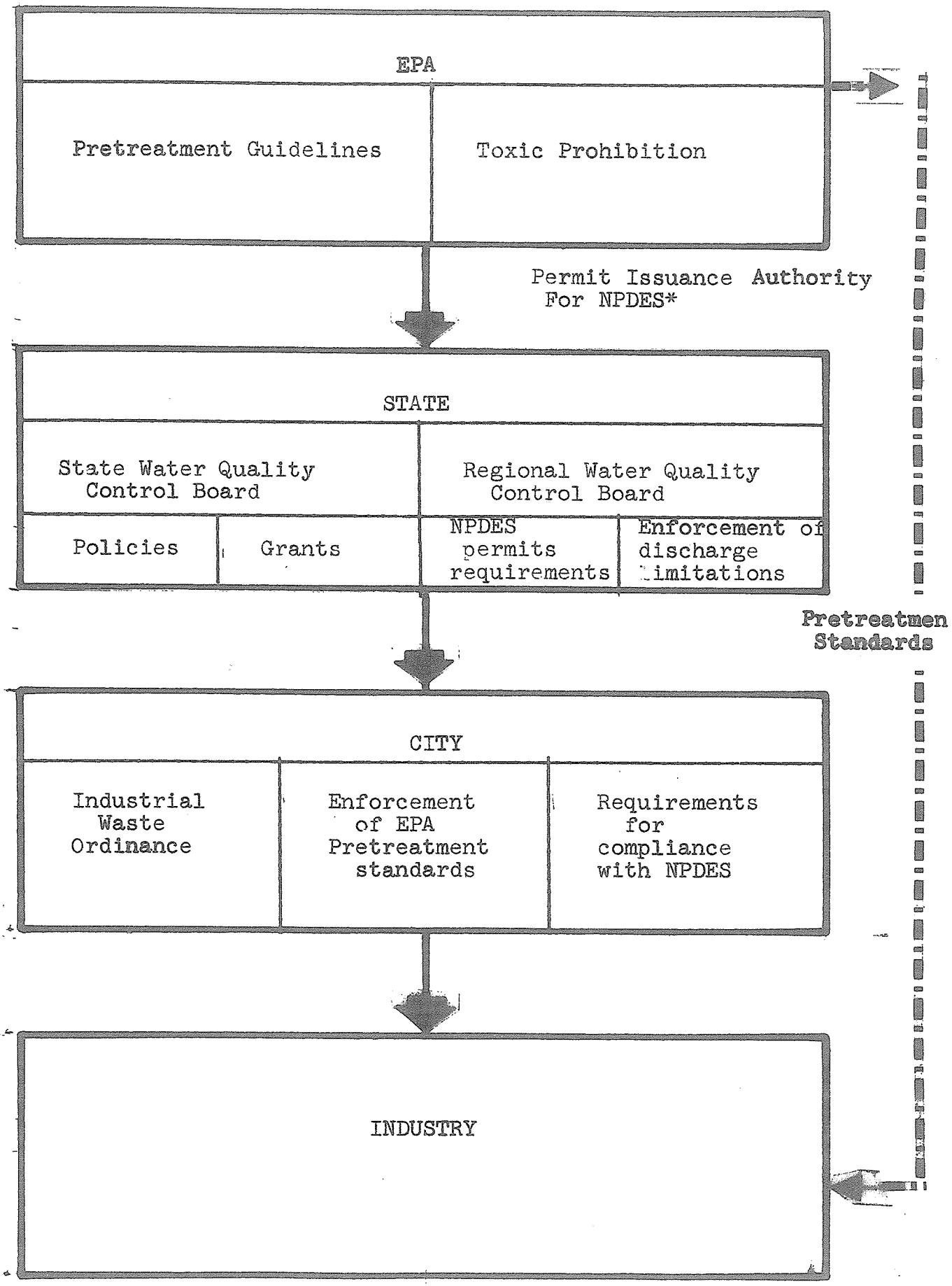
One such policy, approved by the State Board, that directly affects industry is the Water Quality Control Plan for the Ocean

Waters of California. A similar plan is being formulated for the entire San Francisco Bay Basin and when adopted will become the Water Quality Control Plan for the San Francisco Bay Basin.

The City's Industrial Waste Program was originally initiated to protect its sewage system and treatment processes from the adverse affects of the industrial discharges and, subsequently, expanded to implement the objectives of the State and Federal programs.

This Chapter discusses these three interrelated programs as they affect industry. A diagram of this relationship is shown on the next page.

Plate II-1



* NPDES National Pollutant Discharge Elimination System

The Federal Water Pollution Control Act Amendments of 1972 and Pretreatment Standards

In October 1972, the Congress of the United States enacted Public Law 92-500, an amendment to the Federal Water Pollution Control Act. See (Appendix A for a summary of relevant sections of the law). This legislation, which was intended to be administered by the Environmental Protection Agency (EPA), established as the national goal the restoration and maintenance of the natural integrity of the nation's waters through the elimination of all pollutant discharge by 1985.

Specific provisions of the Act directed the Administrator of EPA to promulgate guidelines which would; affect the prohibition of toxic pollutant discharges, establish pretreatment standards for wastes dumped by industry into the nation's navigable waterways and public treatment systems, and insure that industry pay its fair share of the maintenance, operation and capital improvement costs of treatment works.

The vehicle for achievement of these goals is the National Pollutant Discharges Elimination System. (NPDES; PL 92-500 Sec. 402). Existing, and eventually all pollutant discharges will require an NPDES permit. In California, the EPA has delegated permit issuance authority to the State Water Resources Control Board. The State, as provided for by the Act, imposes additional discharge requirements upon permit holders and currently, San Francisco is in the process of obtaining NPDES permits for the City's three treatment plants.

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The Act also directed the Administrator to promulgate guidelines for prohibiting discharge of certain toxic substances in concentrations liable to be damaging to either the receiving waters or treatment works processes and facilities. The Administrator's preliminary guidelines provide that; an industry discharging into a public treatment system be permitted, after taking into account any removal by the publicly owned treatment facilities, to discharge through the sewer system only as much of a toxic pollutant as would be permitted for direct discharge into the nation's navigable waterways. Generally pretreatment standards for dischargers into publicly owned treatment works will be less stringent than standards for direct discharge due to pollutant removals effectuated by the treatment works. To insure equity, any economic advantage that would accrue to sewer system users will be redressed by charges for the use of the public treatment facilities.

The City will be charged by its NPDES permits with enforcement of the Pretreatment Standards (40 CFR 128) issued by the EPA pursuant to Sec. 307 of PL 92-500. In addition, the City must impose by Municipal Ordinance any other pretreatment standards necessary to comply with conditions of its NPDES permit, some of which are set forward by the State's Ocean Water Policy (Tables A and B) and the Secondary Treatment Standards (40 CFR 133.100) issued pursuant to PL 92-500.

Under the Pretreatment Standards (40 CFR 128; see Appendix A

for a summary of these regulations and a flow chart of their application), the disposal of certain wastes into the sewer system by any discharger is prohibited. With only minor differences, the discharge of these wastes is also prohibited by the City Industrial Waste Ordinance (15-71, Sec. 121.).

In addition to these prohibitions, specific standards for pretreatment of "Incompatible Pollutants" are issued for "Major Contributing Industries" belonging to certain "Source Categories" (e.g. Effluent Standards for Glass Manufacturing in Appendix A).

By definition a "Major Contributing Industry" is one that has a discharge of more than 50,000 gallons per day, releases toxic pollutants in toxic amounts, or has a significant impact on the City sewers and/or treatment facilities. A "Source Category" is a group of closely related industries, defined in terms of their SIC (Standard Industrial Classification) Code, and "Incompatible Pollutants" are anything other than BOD, pH, suspended solids, and fecal coliform bacteria except those additional pollutants identified in the NPDES permit if the publicly owned treatment works was designed to treat such pollutants, and in fact does remove such pollutants to a substantial degree.

Industries must be in compliance within three years from the date of guideline promulgation for their source category, and construction of pretreatment facilities must begin within 18 months after promulgation. More stringent standards apply

to new sources (constructed after formulation of the standards) than to existing sources and standards for new sources require immediate compliance.

By the end of 1973, pretreatment standards had been promulgated or proposed for the twenty-eight Source Categories listed below. These standards are promulgated through the Federal Register and following publication became permanent portions of PL 92-500, Title 40 Chapter 1.

PART 405 - DAIRY PRODUCTS PROCESSING INDUSTRY

PART 406 - GRAIN MILLS

PART 407 - CANNED AND PRESERVED FRUITS AND VEGETABLE PROCESSING

PART 408 - CANNED AND PRESERVED SEAFOOD PROCESSING

PART 409 - SUGAR PROCESSING

PART 410 - TEXTILE MILLS

PART 411 - CEMENT MANUFACTURING

PART 412 - FEEDLOTS

PART 413 - ELECTROPLATING

PART 414 - ORGANIC CHEMICALS MANUFACTURING

PART 415 - INORGANIC CHEMICALS MANUFACTURING

PART 416 - PLASTICS AND SYNTHETIC MATERIALS MANUFACTURING

PART 417 - SOAP AND DETERGENT MANUFACTURING

PART 418 - FERTILIZER MANUFACTURING

PART 419 - PETROLEUM REFINING

PART 420 - IRON AND STEEL MANUFACTURING

PART 421 - NONFERROUS METALS MANUFACTURING

PART 422 - PHOSPHATE MANUFACTURING

PART 423 - STEAM ELECTRIC POWERPLANTS

PART 424 - FERROALLOY MANUFACTURING

PART 425 - LEATHER TANNING AND FINISHING INDUSTRY

PART 426 - GLASS MANUFACTURING

PART 427 - ASBESTOS MANUFACTURING

PART 428 - RUBBER TIRE MANUFACTURING

PART 429 - TIMBER PRODUCTS

PART 430 - PULP, PAPER AND PAPERBOARD MILLS

PART 431 - BUILDERS PAPER AND BOARD MANUFACTURING

PART 432 - MEAT PRODUCTS

It is anticipated that by the end of 1974 standards will have been issued for at least 32 additional categories. However, San Francisco has many small industries for which standards will not be available for some time, therefore, these industries will initially be regulated under provisions of the municipal Ordinance.

Because the City does not yet have its NPDES permits, it is difficult to accurately determine the actual toxic concentration limitations on source categories for which standards have been promulgated. This results from a provision of the Administrator's Guidelines for Pretreatment Standards, that effluent limitations for Incompatible Pollutants may be less stringent to the degree that the NPDES permits commit the City's treatment plants to removal of that pollutant.

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For example, if the City's NPDES permit commits the City to remove 50% of the copper coming into the plant, then an industry may discharge twice the concentration of the copper specified by the Pretreatment Standards for the source category. Despite this present uncertainty concerning what standards will eventually apply to a given source category, the standards must be met within three years from the date of promulgation.

The gap between the time Pretreatment Standards already promulgated and those soon to be promulgated will go into effect (late 1977) and the time the City's new secondary plant comes on line, poses a serious problem. The secondary plant will, for most incompatible pollutants, be more efficient than the present primary facilities. The pretreatment requirements imposed upon industry for removal of those pollutants will therefore, become less stringent as the City, in its NPDES permits, is committed to a higher percentage removal. Thus, some industries are faced with the installation of equipment that may not be needed after the secondary plant comes on line. Presently, discussions between City officials and EPA personnel are being conducted in an attempt to resolve this apparent inequity.

State Program

Since the passage of the Dickey Act in 1949 and subsequent major legislation such as the Porter-Cologne Act of 1970, the State of California under the administrative jurisdiction of the State Water Resources Control Board and its Regional Water

Quality Control Boards, has conducted a comprehensive program of water pollution abatement.

Past practice has been that the Regional Boards have prescribed requirements for localities based on State Board policies. Periodically, the Regional Board has increased the requirements for both the effluent quality from the City's three treatment plants, and, the receiving water at the point of disposal.

In recent years emphasis on control of pollutants has been expanded from solely physical pollutant parameters such as floatables, settleables, suspended matter, and temperature to include pollutant parameters that are directly influenced by industrial discharges. For example, in 1971, Regional Board Resolution 71-71 set forth waste discharge requirements for the North Point Sewage Treatment Plant, in addition to the usual physical constituents of the waste stream, parameters directly effecting industry were included such as dissolved sulfides, turbidity, pH, lead, copper, and a provision that toxicity limits would be adopted at the earliest practicable date.

Just prior to the passage of Federal legislation (PL 92-500) in 1972, the Regional Board proposed tentative requirements for pollutant discharges with move restrictive limits which would have had even greater effect upon contributing industries.

Because the federal law included a permit system for efficient disposal, which will be discussed within the federal program segment hereafter, the State requirements were never adopted for the City's industrial waste discharges. As previously mentioned, the State adopted a Water Quality Control Plan for Discharge into the Ocean Waters of California in October 1972. This plan, (a portion of which is included in Appendix A) was of major significance in the control of discharged heavy metals which are most often directly attributable to industrial activity. The quality requirements for compliance with the Ocean Policy standards are identified in the two tables found on the next page. (Plate II-2).

Table "A" consists of extremely rigid requirements for grease, floating particulates, suspended solids, settleable solids, turbidity and pH. A procedure for being granted a variance to these requirements under certain conditions is contained in the Plan.

Table "B" list nine heavy metals, cyanide, phenolic compounds, ammonia, total identifiable chlorinated hydrocarbons, toxicity concentrations and radioactive concentrations for which no variances is permitted. Of particular interest is the restriction of chromium of .005 mg/l, a standard which all known treatment methods are incapable of achieving reliably. These heavy metal requirements on the City's effluent discharge necessitate strong source control procedures and vigorous

PLATE II-2

Water Quality Control Plan For The Ocean Waters of California

TABLE A

	Unit of Measurement	Concentration not to be exceeded more than: 50% of time	10% of time
Grease and Oil (hexane extractables)	mg/l	10.	15.
Floating Particulates (dry weight)	mg/l	1.0	2.0
Suspended Solids	mg/l	50.	75.
Settleable Solids	mg/l	0.1	0.2
Turbidity	JTU	50.	75.
pH	units	within limits of 6.0 to 9.0 at all times.	

TABLE B

	Unit of Measurement	Concentration not to be exceeded more than: 50% of time	10% of time
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Chlorine Residual	mg/l	1.0	2.0
Ammonia (expressed as nitrogen)	mg/l	40.	60.
Total Identifiable Chlorinated Hydrocarbons	mg/l	0.002	0.004
Toxicity Concentration	tu	1.5	2.0
Radioactivity		not to exceed the limits specified in the California Administrative Code	

enforcement activities against dischargers.

The Water Quality Control Plan for San Francisco Bay is presently being developed by a private contractor to the State Water Resources Control Board. This plan when complete will provide the planning framework for the nine bay counties and will be instrumental in the development of regional and sub-regional pollution abatement strategies. It is contemplated that the plan's proposed requirements for the San Francisco Bay will be no less rigid than those adopted for the ocean.

City Program

San Francisco's Industrial Waste Program takes into account State and Federal interests and encompasses three broad goals based upon the City's needs and existing and developing regulations. These goals are; the prohibition of industrial discharges for which no practical treatment process has been developed, the restriction of certain wastestream components to tolerable limits of concentration and quantity, and, the assessment of industrial discharges for their fair share of additional treatment costs caused by discharges requiring treatment beyond that necessitated by typical domestic sanitary wastes.

THE NEED

Prior to 1971, the Industrial Waste Section of the Public Works Code provided restrictions and prohibitions for discharges into the sewerage system, of substances likely to damage the

system or the treatment process. While penalties for violations were provided, in practice they were never adequately enforced and treatment processes were often adversely affected. Blockages in the sewer system caused by accumulations of grease and other solid substances occurred, corrosive discharges were suspected of damaging the collection and transport system, and "slug" discharges of industrial based chemicals severely affected the treatment processes.

As concern for the maintenance of the unique and sensitive nature of the San Francisco Bay marine environment became widespread, various regulatory agencies promulgated rules and regulations designed to protect the marine environment from damage stemming from wastewater discharges. These rules and regulations generally reflected a policy of protecting the beneficial uses of the receiving water to the extent possible through application of current technology.

The need for an effective Industrial Waste Program in San Francisco became obvious by the 1950's. Municipal treatment plant operators had long been aware that contributions to the wastewater influent attributable to industrial sources could have adverse effects upon the collection and transport facilities of a water pollution treatment system as well as upon the process utilized by the system itself.

In San Francisco the slaughtering industry presented a particularly difficult problem. Large quantities of paunch

manure, hooves and other animal parts were especially difficult for the system to handle. The poultry industry often utilized the sewage system to dispose of feathers and other inedible portions of fowl. The color of the incoming wastestream at the City's Southeast Plant often ranged from bright red to green due to chemical industries and paint manufacturers. Additionally, slug releases of sulfides attributable to the tanning industry and necessitating excessive use of chlorine to achieve reliable coliform kills had caused concern, and the presence of grease attributable to the large population of restaurants in the City were causing plugging of the sewer system.

The presence of certain heavy metals in plant influent require processes which involve additional expensive steps to achieve acceptable effluent standards. Studies indicate that industrial based contributions to the Southeast Plant's influent are responsible for a substantial portion of the lead and mercury present.

These undesirable loadings often do not occur on a regular basis. Consequently, the wide and rapid variations in the characteristics of the Southeast sewage have made it necessary to select treatment chemical dosages which are at times in excess of the actual requirements in order to obtain satisfactory results. Residuals of chemicals utilized by the treatment process often must also be removed prior to discharge in order to meet toxicity standards.

For example, the Southeast Plant periodically experiences difficulty in obtaining disinfection by chlorination. This difficulty is directly attributable to the presence of sulfide compounds. This compound's presence in Southeast influent causes high and varying chlorine demands in order to reliably obtain disinfection.

Responses to the Need

Early in 1971 after conferences with several Industrial Associations and the San Francisco Chamber of Commerce, and following several public hearings, the Director of Public Works recommended to the Board of Supervisors an amendment to the Public Works Code which was adopted and passed and provides for:

(a) The prohibitions of the discharge of certain material into the sewer system.

(b) Setting of numerical limits on certain characteristics of discharges, i.e., toxicity, BOD, and suspended solids.

(c) Flexibility in meeting new State or Federal requirements by conferring authority to limit, when necessary, the concentration of any substance in any industrial waste discharge to the concentration of said substance in "Normal Raw Sewage"*.

*Because the Richmond-Sunset Water Pollution Control Plant serves an area which is almost exclusively residential, "Normal Raw Sewage" is defined as: having the strength, Richmond-Sunset Plant.

(d) Establishment of fee schedules to support the administration of the Industrial Waste Control Program, and determination of Industries' fair share of the additional cost for treatment of industrial wastes.

(e) The establishment of a special fund (Industrial Waste Fund) for the purpose of receiving all monies collected to be used for the administration, maintenance, and operation of the Industrial Waste and Water Pollution Control Programs.

(f) The creation of an Industrial Waste Review Board to hear and decide appeals from actions of the Director of Public Works.

(g) Establishment of penalties for violations of the provisions of the Ordinance.

Early Program Development

The Industrial Waste Ordinance provided for the prohibition of certain wastes through a program of source control, and, the levying of surcharges to dischargers of certain pollutants.

During 1971, the program functioned under the jurisdiction of the Bureau of Water Pollution Control with a staff of 5 and a total budget of $75,590.

Identification of Industrial Dischargers

The bulk of initial staff effort was focused toward compilation of an Industrial Discharger's File for the purpose of billing and wastestream inspection.

Several sources for obtaining this data were utilized. Local tax records, the telephone directory and, a privately circulated business listing published by a listing service were the principle sources of this information. Duplications are inherent in a compilation derived from such sources, therefore, telephone surveys and actual field inspections were utilized to purge the file of errors. Average water consumptions were determined from San Francisco Water Department records and became part of the Data File. From this Master Data File, a computer program was developed to account for the collection of fees and charges authorized by the ordinance.

The Ordinance provided that the collection of the surcharge fees be accomplished in conjunction with the water bill. This required the reprogramming of the Water Department's billing program, the redesign and printing of new Water bills, and establishment of an interdepartmental system of initiating, controlling and revising collectible accounts.

Establishing Administrative Procedures

The Director of Public Works promulgated several general

rules and regulations designed to provide for smooth implementation of the Ordinance. These orders, which are reproduced in their entirety in Appendix A, provided for use of either metered water or the Director's estimate of water consumption for billing purposes, the establishment of annual fees and, clarification of several points of ambiguity within the Ordinance.

Waste Discharge Report

Work was commenced upon the development of a Waste Discharge Report (WDR) by the Department. This activity included the comprehensive review of forms utilized by other public agencies around the country engaged in regulating similar industrial waste programs. The resulting product features a lab ratory analysis of the dischargers waste stream which must be performed by a state certified laboratory at the dischargers expense. It was intended that these forms would supply ital information for computing surcharges to industrial users, and pinpoint areas where source control would be of maximum benefit.

Implementation Actions

Upon completion of the preliminary Waste Discharger file the industrial community was categorized into the following three major categories:

		No. of Firms
A.	Restaurants*	3,100
B.	Process Dischargers	
	1. EPA Critical Dischargers List (Appendix A)	205
	2. Others	1,622
C.	Automotive & Related Industries	
	1. Garages, Service Stations, etc.	885
	2. Auto Laundries	28
	TOTAL	5,840

*Includes Standard Industrial Codes (SIC) Code No. 5813 Drinking Places where food is not served. Drinking places will pay the Industrial Waste Inspection Fee only.

Following categorization, the Director convened a public hearing on the proposed classification and then issued Public Works Orders Nos. 88,915 and 88,916. (See Appendix A). The effect of these orders was the classification of restaurants as an industry-wide group and the determination that this group should pay the industrial waste surcharge fee as established in Section 122.3 of Article 4.1, Industrial Waste Ordinance.

The Director's actions were immediately appealed by the Golden Gate Restaurant Association, and the Industrial Waste Review Board heard the matter on August 2, 1971. The Board upheld the Director and the Association initiated court action. Subsequent negotiations between the Department and the Associ-action resulted in an out-of-court-agreement that restaurants would be charged for the grease constituent of their waste stream only. Director's Order 88,916 was issued making this policy standard operating procedure. (See Appendix A).

Discharger Classification

Following a public hearing in May 1972, the Director of Public Works issued Public Works Order 91758 (Appendix A). This order provided for the classification of industrial waste dischargers into appropriate groupings identified by SIC Group, as listed in the Standard Classification Manual, Executive Office of the President, Bureau of the Budget 1967.

This action facilitated the establishment of rates for industrial dischargers after inspection and analyzation of the wastewater streams discharged by representative firms within SIC groups, were projected to all firms within the group. The Director's order stated: For a general investi-gation of a SIC group, a sufficient number of dischargers, excluding dischargers who use less than 1000 cubic feet of water on the average per month, will be selected in descending

order of monthly water consumption to provide a representation of at least 50% of known water consumption in such SIC group or 10% of the number of dischargers with usuage of 1000 cubic feet or more in such SIC group.

Having established this methodology, 165 firms within SIC groups were selected from whom data would be collected. A sample copy of the Waste Discharge Report is found in Appendix B. The selected firms represent 39% of the City's industrial waste dischargers and collectively account for 87% of the known industrial wastewater flows.

Planning the 1973 Program

As 1972 drew to a close, it became apparent that the rapidly expanding requirements being placed upon the industrial waste program could best be met by use of a planned approach. The 1973 program was designed with the following considerations in mind; an improvement of the Industrial Waste Inspection fee procedure to streamline billing and collection activities, development of a communication system capable of supporting the many inter-departmental activities of the program, a determination of the influent and effluent characteristics at the three plants in order to evaluate the effectiveness of the program and, development of an educational campaign to explain to and inform the industrial community of the need for stringent discharge requirements and the necessity of completing the Waste Discharge Reports.

In order to accomplish these goals, the following tasks were designed:

Task 1 Outstanding Waste Discharge Reports

Complete the collection of Waste Discharge Reports. By the end of 1972 most requested firms had not complied with the Department's previous request for Waste Discharge Reports. While many reasons might have been responsible for this lack of response, the Department determined that a speedy resolution to this matter would be in the Program's best interest and therefore assigned high priority to the completion of this task, extending to the use of legal remedy where required.

Task 2 Imposition of Surcharge Fees

The Industrial Waste Ordinance provided for the imposition of fees based upon concentrations of certain pollutants in dischargers wastestream. After receipt of sufficient waste discharge reports, calculation of surcharge fees for industry groups based upon concentrations of COD, settleable material, and grease needed to be made.

Task 3 Establish Administrative Procedure For Billing, Accounting, Data Storage and Retrieval, and Delinquency Control

The then existent administrative procedures and organizational structure were deemed insufficient to cope with the complex processes required for the orderly collection of the

several different fees associated with the Industrial Waste Program. These fees include Waste Discharge Report Fees, Industrial Waste Review Board Filing Fees, Surcharge Fees, and Penalty Fees. Additionally, successful implementation of the Ordinance required the integration of activities between several city agencies including the Bureau of Accounts, Bureau of Engineering, Central Permit Bureau, the Controller's EDP operation, General Account Office, and the Water Department's Commercial and EDP Office. Consequently, a need to establish administrative procedures for billing, accounting, and data management existed.

Task 4 Expansion of Treatment Plant Monitoring

To accurately assess the dilution effect of domestic sewage on all waste characteristics of concern, the monitoring of treatment plant influent needed to be expanded to include these additional constituents:

Turbidity
Floating Particulates
Total Identified Chlorinated Hydrocarbons
Radioactivity
Arsenic
Mercury
Nickel
Silver
Cadmium

Therefore, a task designed to accomplish this activity was recommended.

Task 5 Educational & Information Program

The Industrial Waste Discharge Program was a new program and several governmental agencies were directly and indirectly involved. Industry was needful of information pertaining to the necessity and desirability of the Industrial Waste Program. DPW needed to develop material which could be used in presentations to both the general public and the industrial community. These presentations were intended to enlighten industry and the general public of the necessity for waste discharge control programs, and, development of good working relationships between industry and governmental agencies charged with implementing these programs.

Task 6 Defining Maximum Limits of Pollutant Discharges and Establishing Industries Fair Share of Wastewater Management

A primary objective of the Ordinance was the elimination of pollutant discharges in quantities and concentrations that exceeded the treatment systems capability to satisfactorily treat prior to discharge. Of equal importance was the determination of industries "Fair-Share" for the cost of wastewater management and definition of a process for recovery of this "Fair-Share" cost through an already complicated system of fees and charges.

Task 7 Enforcement and Surveillance Activities

The activities planned under this Task included those necessary to enforce the level of source control determined as desirable by the aforementioned Task 6.

DPW was to review each Waste Discharge Report to determine if source control was necessary and if a self monitoring program was to be instituted. Subsequent to publication of public hearing results surveillance of each discharger involved was to be initiated to insure that required source treatment was accomplished in accordance with the time schedules adopted at the hearings.

Task 8 Development of a Process For Appeals

The Industrial Waste Ordinance includes a provision for appeals to findings of the Director of DPW to be heard by a Review Board composed of five persons. Activities necessitated by this process include the maintenance of the Industrial Waste Review Board records, the publication of hearing dates and final decisions.

Task 9 Revision to City Ordinances and Regulations

In view of the 1972 Amendments to the Federal Water Pollution Control Act and new regulations stemming from both EPA and the State, revisions to the existing Industrial Waste Ordinance were necessary. Continual reviews of City

legislation related to the Industrial Waste Discharge Program combined with the preparation and processing required to modify such existing City legislation could be anticipated.

CHAPTER III - 1973 PROGRAM

In January of 1973, the Industrial Waste Program was officially transferred from the Bureau of Water Pollution Control to the Bureau of Engineering.

This administrative action, brought into closer daily relationship the treatment works planning, design, and management activities, with the Industrial Waste Program's enforcement activity. Additionally, the transfer made possible centralized billing operations by bringing the industrial waste surcharge activity under control of the Bureau of Engineering, which had been responsible for administrating the collection of the sewer service charge since its inception.

Following is a summary of the program's 1973 activity which was focused into tasks as discussed in Chapter II.

Task 1 Collection of Waste Discharge Reports

Requests for Waste Discharge Reports from selected San Francisco firms on a class basis were first made in May of 1972. The Department selected 101 firms which were responsible for 90% of the known industrial wastewater flows. The return of these initially requested reports was delayed for a variety of reasons, such as; difficulty in securing licensed laboratory services, delays in obtaining home office approvals, internal funding difficulties, and lethargic compliance by dischargers. The Department nevertheless continued requesting WDR's of

different firms until a total of 231 requests had been made by the end of 1972.

By mid-January 1973, 136 WDR's had been received, 28 were pending, and 67 firms had been removed from the list because they had suspended operations in San Francisco.

By June 1973 all critical industry WDR's had been collected and currently the file of WDR's for active dischargers numbers 161. A listing of firms from whom WDR's have been received and their average water consumptions is included at the end of this Chapter.

Task 2 Imposition of Surcharge Fees

A major portion of the 1973 program effort was directed toward completion of this task. The process utilized was dependent upon data extracted from returned WDR's, consequently, until a representative number of reports were received and evaluated from individual firms within industrial groups, loading factors for a group could not be determined. By administrative policy a "representative number" of WDR's was deemed to be those which represented at least 50% of the water consumed by the entire industry group. Plate III-1 which follows on the next four pages tabulates data extracted from WDR's of 62 SIC groups.

In the absence of evidence that significant variations existed in processes within industrial groups, the concentrations

PLATE III-1

SIC	Industrial Class	1 Total No.	2 Total Flow (100 units)	3 No. WDR	4 WDR Rep. % T. Flow	ESTIMATED INDUSTRIAL CLASS DISCHARGE (lb./day)												
						Grease	Susp. Mat.	COD	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	TICH
2011	Meats	1	110.	1	-	1850	2430	9010	0.002	0.048	0.023	0.175	0.273	NIL	0.114	0.009	0.478	0.002
2013	Sausage	20	7.9	8	69	234	511	2570	0.026	0.203	0.045	0.175	0.038	0.002	0.132	0.018	0.295	0.002
2021	Butter	3	6.1	3	-	28	350	814	0.001	0.003	0.004	0.016	0.014	NIL	0.006	0.003	0.091	NIL
2026	Milk	5	130.	5	-	1270	1320	9170	0.003	0.003	0.108	0.108	0.062	0.003	0.005	0.005	0.027	0.003
2032	Canned Specialities	1	2.3	1	-	3	24	153	NIL	NIL	NIL	0.003	0.001	NIL	0.002	0.002	0.005	NIL
2033	Canned Juices	1	10.3	1	-	8	44	708	0.002	0.002	0.002	0.004	0.002	NIL	0.002	0.002	0.002	NIL
2037	Frzn. Vegetables	1	11.1	1	-	3	5	23	0.001	NIL	0.001	0.003	0.003	0.002	0.001	NIL	0.019	NIL
2038	Frzn. Specialties	2	35.0	2	-	1760	320	1090	0.020	0.001	0.016	0.036	0.007	NIL	0.036	NIL	0.153	NIL
2048	Feeds	1	4.8	1	-	4	47	1628	0.001	0.002	0.002	0.004	0.003	NIL	0.002	0.002	0.222	NIL
2051	Bakery Prod.	63	94.6	5	31	956	235	8420	0.019	0.053	0.010	0.295	0.019	0.002	0.059	0.009	2.36	0.002
2065	Candy	7	8.7	2	83	13	25	309	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	0.001	NIL
2066	Chocolate	1	1.3	1	-	1	5	21	NIL	NIL	NIL	0.001	NIL	NIL	0.001	NIL	0.001	NIL
2075	Soybean Prod.	4	20.9	3	95	18	78	455	0.001	0.003	0.017	0.048	0.011	NIL	0.008	0.003	0.039	NIL
2076	Vegetable Oil	1	136.	1	-	388	470	2200	0.028	0.028	0.226	0.312	0.056	0.003	0.028	0.028	0.425	0.003
2077	Animal Fats	4	41.3	4	-	266	369	1940	0.003	0.430	0.017	0.112	0.036	0.010	0.60	0.012	0.027	0.001
2079	Margarine	1	76.1	1	-	3770	3760	7980	0.016	0.016	0.079	0.285	0.047	0.002	0.016	0.016	0.127	0.002
2082	Beer	4	727.	4	-	227	1770	11700	4.53	0.151	15.1	1.66	1.36	0.015	0.529	0.302	5.29	1.66

1. Total number of firms identified. 2. Sum of water consumptions of identified firms 1 unit = 100 cu ft/ month
3. Number of firms filing WDR. 4. Percent of flow represented by firms filing WDR.

PLATE III-1

SIC	Industrial Class	Total No.	Total Flow (100 units)	No. WDR	WDR Rep. % T. Flow	ESTIMATED INDUSTRIAL CLASS DISCHARGE (lb./day)											
						Grease	Susp. Mat.	COD	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	TICH
2083	Malt	1	33.4	1	-	8	121	1290	0.004	0.014	0.003	0.014	0.014	NIL	0.014	0.014	0.014	NIL
2085	Liquors	4	4.6	1	78	1	1	30	0.001	0.001	NIL	0.001	0.010	NIL	0.005	0.002	0.001	NIL
2086	Soft Drinks	4	17.6	3	-	29	15	1100	0.001	0.007	0.002	0.029	0.103	NIL	0.007	0.007	0.051	NIL
2087	Flavorings	8	36.1	3	92	11	68	720	0.004	0.015	0.060	0.045	0.195	NIL	0.013	0.013	0.218	NIL
2091	Canned Fish	3	9.4	2	93	9	34	286	0.001	0.001	0.008	0.004	0.003	NIL	0.003	0.007	0.094	NIL
2092	Fresh, Frzn. Fish	3	1.6	1	66	2	6	30	NIL	NIL	NIL	0.006	0.002	NIL	NIL	NIL	0.020	NIL
2095	Coffee	4	28.0	2	55	239	280	4320	0.019	0.001	0.001	0.175	0.047	0.001	0.001	0.001	0.466	0.001
2099	Food Preparations	9	2.4	1	40	16	27	153	NIL	0.001	NIL	0.001	0.009	NIL	NIL	NIL	0.028	NIL
2261	Finished Fabric	1	2.7	1	-	8	3	65	NIL	NIL	0.001	0.028	0.005	NIL	NIL	0.001	0.022	NIL
2752	Printing, Litho	124	49.3	4	44	44	211	1550	0.001	0.001	1.08	18.5	0.003	0.001	2.46	0.260	68.3	0.001
2793	Photoengraving	6	9.0	6	-	5	11	235	0.002	0.004	0.143	2.85	0.039	NIL	0.003	0.204	4.19	NIL
2795	Litho. Plates	3	1.6	1	56	NIL	1	2	0.001	NIL	NIL	0.095	0.003	NIL	0.002	NIL	0.037	NIL
2834	Pharmaceuticals	4	2.6	2	99	1	2	49	NIL	NIL	NIL	0.004	0.002	NIL	0.001	NIL	0.002	NIL
2841	Soap	3	3.7	1	98	7	15	446	0.001	0.001	0.001	0.008	0.004	NIL	0.007	0.001	0.012	NIL
2842	Disinfectants	3	1.6	2	96	1	2	181	NIL	NIL	0.029	0.003	0.001	NIL	0.012	NIL	0.004	NIL
2851	Paint	7	14.9	1	87	2	1	131	0.003	0.006	0.016	0.012	0.016	0.002	0.016	0.006	0.056	NIL
2891	Adhesives	1	4.9	1	-	41	530	1290	0.001	0.002	0.001	0.085	0.029	NIL	0.002	0.003	0.101	0.001

PLATE III-1

SIC	Industrial Class	Total No.	Total Flow (100 units)	No. WDR	WDR Rep. % T. Flow	ESTIMATED INDUSTRIAL CLASS DISCHARGE (lb./day)												
						Grease	Susp. Mat.	COD	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	TICH
3111	Leather	2	133.	2	-	1880	9462	15500	0.332	0.111	365.	0.332	0.415	0.008	NA	NA	1.80	NA
3273	Concrete	5	35.2	3	88	20	518	122	0.007	0.029	0.125	0.059	0.110	NIL	0.037	0.015	0.081	NIL
3341	Non-ferrous Metals	1	18.2	1	-	2	1	8	0.004	0.009	0.002	0.265	2.27	NIL	0.038	0.008	4.74	0.001
3411	Metal Cans	3	16.6	1	-	3	1	16	NIL	NIL	NIL	0.082	0.039	NIL	NIL	0.041	1.26	NIL
3462	Ferrous Forgings	1	1.0	1	-	1	1	2	NIL	NIL	0.002	0.004	0.005	NIL	0.011	NIL	0.733	NIL
3471	Electroplating	10	192.	6	-	440	1000	1521	0.080	0.080	4.80	4.80	1.48	0.004	0.340	0.320	2.20	0.004
3479	Galvanizing	1	6.3	1	-	1	2	28	0.014	NIL	0.130	0.048	NIL	NIL	NIL	NIL	117.	NIL
3691	Batteries	5	1.2	1	51	NIL	1	1	NIL	0.002	0.001	0.011	0.047	NIL	0.007	NIL	NIL	NIL
3731	Shipyards	3	456.	2	98	104	294	4980	0.057	0.190	0.047	3.03	1.04	0.001	0.190	0.190	6.74	0.060
4121	Taxicabs	5	6.4	1	79	3	12	17	0.001	0.001	0.001	0.008	0.112	NIL	0.003	0.003	0.080	NIL
4131	Bus Lines	8	19.6	1	9	244	97	1100	0.001	0.010	0.010	0.020	0.205	0.001	0.001	0.005	0.872	0.004
4171	Bus Terminals	2	24.7	1	96	397	600	31284	0.043	0.056	0.226	0.585	1.49	0.004	0.092	0.031	2.36	0.002
4213	Trucking	18	14.2	1	90	33	52	244	0.006	0.003	0.310	0.103	0.189	NIL	0.044	0.001	0.721	NIL
4939	Utilities	1	89.1	1	-	25	9	458	0.002	0.037	0.241	0.056	0.185	0.002	0.074	0.056	0.185	NIL

PLATE III-1

SIC	Industrial Class	Total No.	Total Flow (100 units)	No. WDR	WDR Rep. % T. Flow	ESTIMATED INDUSTRIAL CLASS DISCHARGE (lb./day)												
						Grease	Susp. Mat.	COD	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	TICH
5085	Indst. Supplies	2	2.4	1	-	24	19	245	0.015	NIL	0.255	0.009	0.638	NIL	NIL	0.050	1.33	NIL
5093	Scrap	5	6.3	2	54	19	31	190	NIL	0.006	0.011	0.031	0.001	NIL	0.002	0.003	0.170	0.003
5144	Poultry Prod.	5	6.9	1	63	12	38	149	0.001	0.001	0.001	0.026	0.016	NIL	0.003	0.001	0.187	NIL
5146	Fish Prod.	9	14.7	4	80	28	17	107	0.003	0.003	0.005	0.040	0.015	NIL	0.015	0.003	0.122	NIL
5147	Meat Prod.	12	27.6	4	62	83	132	330	0.003	0.006	0.010	0.069	0.052	NIL	0.017	0.006	0.575	0.001
5541	Gas Stations	324	48.8	1	0	13	76	230	0.010	0.024	0.030	0.112	0.561	0.001	0.091	0.001	0.529	NIL
7211	Power Laundries	13	127.	4	92	286	413	3520	0.066	0.003	0.003	0.025	0.105	0.003	0.003	0.003	7.80	0.002
7217	Carpet Cleaning	9	7.9	4	92	2	11	59	0.002	0.003	0.007	0.018	0.040	NIL	0.003	NIL	0.096	NIL
7218	Indst. Launderers	3	80.9	3	-	1100	842	3400	0.012	0.174	0.336	0.219	0.002	0.012	0.022	0.421	5.50	0.001
7542	Car Washes	15	51.4	9	88	53	214	374	0.006	0.032	0.021	0.128	0.963	0.001	0.064	0.021	1.07	NIL
7699	Sanitary Services	1	.4	1	-	30	16	186	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	0.080	NIL
8062	Gen. Hospitals	20	1010	18	87	1260	4420	10500	0.126	0.189	0.610	3.07	1.58	0.863	0.968	2.99	9.03	0.105
8069	Speciality Hospitals	5	22.8	5	-	166	70	521	0.002	0.005	0.027	0.102	0.024	0.010	0.007	0.029	0.203	0.001

of allowable loadings detailed by the WDR's were proportioned to the water consumption and average loading rates were established which after public hearings were applied to the entire industry group.

Evaluation of completed WDR's received by June 1973 resulted in the adoption, after public hearings of the loading rates shown on Plate III-2 for 28 industrial classifications which appears on the next page. Surcharge billings based upon these loadings for some 3,000 firms commenced October 1973.

While this process was utilized for determining the majority of loading rates, it was not used for two major groups; restaurants, and coin-operated laundries.

Restaurants and Eating Places

The significant impact of the City's 2,800 eating places upon the City's sewage treatment and transport facilities has been previously discussed in this document, however, the process of economically determining each establishment's precise loading rate was difficult to determine.

The WDR evaluation method utilized for the bulk of San Francisco's industries was unsatisfactory for a variety of reasons, among them the difficulty of determining water consumed in multi-use service addresses attributable to the restaurant, and, the heavy financial burden which would have to be borne by each establishment should they be required to complete a WDR.

Although "eating places" were known to be dischargers of COD and suspended solids, by agreement (previously discussed in Chapter II; see Page II-19) between the Director and the Golden Gate Restaurant Association, industrial waste surcharge fees were to be based upon grease only. Therefore, only information pertaining to water consumption levels was required to calculate the Surcharge Fee.

Determination of individual "eating places'" water consumption, however, was no small task. Many of the City's eating places are located in multi-use structures which have only one water service account. Additionally, large variances in establishment size exist. Further compounding the issue, some establishments were busier than others and, most likely, responsible for a larger share of total discharged grease. These facts dictated development of a practical, defensible estimation system.

The estimation system finally adopted was based upon a survey of actual water consumption patterns exhibited by similar type eating establishments equipped with individual water meters. This exercise produced data used to compute gross consumption rates for restaurants, pizza parlors, hamburger stands, etc. However, wide variances existed among the restaurants in size as previously mentioned. Several suggestions of basis to further refine this raw data were advanced including gross receipts analysis, total meals served etc. Following discussions

PLATE III-2

ADOPTED LOADING RATES

SIC	Identification	Grease	Suspended Matter	COD	Loadings Adopted
2013	Sausage	119	247	1405	07/13/73
2033	Fruits, Bottled and Canned	59	207	3300	07/13/73
2037	Fruits, Frozen and Juices	74	65	389	07/13/73
2051	Bakeries	486	1192	4279	07/13/73
2065	Candy	72	142	1767	07/13/73
2085	Liquors	9	6	311	07/13/73
2086	Drinks, Soft	74	42	2947	07/13/73
2087	Extracts, Flavoring	12	86	1753	07/13/73
2091	Canned and Cured Fish and Seafood	51	174	1470	07/13/73
2092	Fish and Sea Food, Packaged	60	182	882	07/13/73
2752	Printing	43	206	1510	07/13/73
2793	Photoengraving	33	115	906	07/13/73
2834	Pharmaceutical	17	45	896	07/13/73
2841	Soap and Detergents	92	190	5790	07/13/73
2842	Cleaning, Specialized	35	41	5317	07/13/73
2851	Paint	7	4	420	07/13/73
3462	Iron and Steel Forging	30	39	109	07/13/73
3471	Plating	101	234	347	07/13/73
3479	Metal Coating	4	16	221	07/13/73
3691	Batteries	1	54	35	07/13/73
5093	Scrap and Waste Material	149	234	1550	07/13/73
5144	Poultry	82	264	1037	07/13/73
5146	Fish and Sea Food	87	51	344	07/13/73
5147	Meat and Meat Products	132	185	585	07/13/73
7211	Laundries, Power	109	157	1338	07/13/73
7215	Coin-Op Laundries	97	149	1206	07/13/73
7217	Rug Cleaning	11	69	374	07/13/73

with the Restaurant Association and other interested parties, determination was made that the basis for estimating water consumed for non-metered food preparation by individual establishments within the restaurant category would be seating capacity and no further revision of the raw data would be made for fast food outlets, social clubs or private halls. Plate III-3 on the following page exhibits this estimation system.

Coin Operated Laundries

Loading rates for coin operated laundries were also impractical to determine by using the WDR method which had been employed for the bulk of San Francisco's industries.

The high cost of having a waste discharge report prepared by a state certified laboratory as provided for by Ordinance was adjudged an intolerable financial burden upon the operators of the City's 316 coin-operated laundries.

In order to spare individual coin-op laundry operators this expense, the Department determined, following consultation with representatives of the National Automatic Laundry and Cleaning Council, the California Coin-Op Association, and East Bay Municipal Utility District, that loading rates for coin operated laundries be established based upon the concentrations of pollutants found in the waste streams of the four smallest Power Laundries (SIC Code 7211) for whom WDR's had been filed and evaluated. Based upon this assumption a

constituent loading fee (Surcharge Fee) of $.0409 per unit of water is currently collected from each of the City's 335 known coin-operated laundries. Plate III-4 on the following page illustrates the calculation basis of the Surcharge Fee for coin-ops.

Task 3 Establish Administrative Procedure For Billing, Accounting, Data Storage and Retrieval and Delinquency Control

In addition to the Industrial Waste Surcharge Fee, the Industrial Waste Program generates revenue from the following fees and charges:

Inspection fees

Self-Monitoring fees

WDR Filing fees

Penalty fees

A detailed explanation of the entire revenue program appears in Chapter IV of this document. During 1973 a good deal of administrative personnel activity expended was directed toward the establishment of reliable fiscal accounting and control procedures. Considerable emphasis was given to automating the billing and penalty procedure for the Industrial Waste Inspection fee.

A computer program was designed to completely automate the procedure of billing, penalty assessment, recording adjustments and fiscal accounting of all the Industrial Waste Program's revenue sources. Steps were taken to effect transfers of the

PLATE III-3

ESTIMATION OF WATER CONSUMPTIONS BY RESTAURANTS**

WITHOUT WATER - ACCOUNTS (i.e. In Multi-Use Buildings)

EATING ESTABLISHMENTS
GUIDELINES FOR ESTIMATING WATER USAGE

	CATEGORY	SEATING CAPACITY	ESTIMATED MONTHLY WATER USAGE UNITS
1.	Burgershops	Under 51	23
1A.	Burgershops	Over 50	81
2.	Cafeteria, Empl		122
3.	Cafeteria, Public	Under 101	38
3A.	Cafeteria, Public	Over 100	261
4.	Coffee Shops		20
5.	Donut Shops		23
6.	Fish & Chips		33
7.	Hofbrau		32
8.	Hotdog	Under 51	21
8A.	Hotdog	Over 50	90
9.	Pizza		28
10.	Private Clubs		104
11.	Sandwich Shops		20
12.	Snack Bars		27
13.	Social Halls		20
14.	Restaurant/Cafe	Under 50	23
14A.	Restaurant/Cafe	50-150	90*
14B.	Restaurant/Cafe	151-300	243*
14C.	Restaurant/Cafe	301-over	477*
15.	Take-out Foods		28

*Seating capacity for restaurants reflect only restaurant seats. If banquet seating is available, raise water consumption by 10% and monthly charge by 10%.

PLATE III-4

Industrial Waste Permissible Discharge Fee

Computation Sheet

Name of Discharger Coin-Ops SIC ID # 7215 -

Address _____

Steps in Calculating Fee	Waste Discharge Constituents		
	Grease mg/l	Suspended Matter mg/l	Chemical Oxygen Demand mg/l
(a) Weighted Average Discharge Loading (by Flow)	97	149	1206
(b) Subtract Domestic Loading (Ord. Sec. 122.3)	59	359	699
(c) Net Industry Discharge Loading	38		507
(d) Constituent Fee per water unit / (c) x 0.00624 x 0.80/ x / applicable (Ord. Sec. 122.3)	$.0057		$.0380
(e) 100% Highest Constituent Fee Above	$.0380		
(f) 50% Second Highest Constituent Fee Above	$.0029		
(g) 25% Lowest Constituent Fee Above			
(h) Total Constituent Fee per unit of Water (e+f+g)	$.0409		
(i) Assumed Water Consumption in Units - 1 Unit = 100 cubic feet			
(j) Industrial Waste Permissible Discharge Fee = h x i			

Based on Average of Four Lowest Power Laundries (7211) filing a Waste Discharge Report.

Industrial Waste file from the Controller's EDP to the Water Department's EDP. This action promoted continuity of effort in the revenue program as the water consumption, taken directly from the Water Department records, is an integral factor in determining the amount charged for both the Industrial Waste Inspection fee and the Industrial Waste Surcharge.

Industrial dischargers situated in multi-use buildings not equipped with individual water meters posed special problems. An Administrative procedure was developed which utilized a fictitious, series of water account numbers and consumptions were estimated based upon either inspections, or average consumptions of similar business which were equipped with water meters.

The billing program for these 600 series accounts was kept separate from regular Water Department accounts to minimize confusion. Identifications of sources to update information required to keep the discharger file current was essential. In addition to our normal field inspections, various sources were investigated including the Tax Collector's records, the Assessor's records, the Water Department, Health Department, and Building Inspection Department records.

Initiation of the Industrial Waste surcharge was delayed until an automated billing and accounts receivable program was completed and tested, the transfer of the Industrial Waste file

from the Controller's EDP to the Water Department's EDP effectuated, and updating of all computer records to program maintenance levels accomplished.

Billing of the Industrial Waste Inspection fee for FY 72-73 was the first order of business as the third quarter of 1973 began. On August 7, 1973, 3,987 accounts were billed the annual Industrial Waste Inspection fee. The billing, assessment of penalties, recording of credit updates, and file maintenance activities are automated. The preparation of update documents (Appendix C) and receipting of payments remains a manual operation.

Review of update information sources continued and working arrangements were developed whereby the Health Department supplies duplicates of their reports, (Appendix C) and the Water Department, a monthly turn on and turn off register. Additional sources continued to be investigated although the final confirmation of all information was with the Industrial Waste Inspectors.

The fourth quarter of 1973 was the scheduled date for the implementation of the Industrial Waste Surcharge Billing based on the estimated or actual water consumption of dischargers and the adopted loadings shown on Plate III-2. The computer system had been prepared to accept the input information and bill on a normal billing cycle. The factors utilized to determine the surcharge fee are displayed in Appendix C.

Many of the City's industrial dischargers consume water at rates sufficiently significant to require monthly reading of their water meters. Having long established the desirability of billing the industrial waste surcharge with the water bill, this fact then required the billing of some industrial consumers monthly while others would be billed semi-monthly. Monthly, one half of this second group is billed.

In November of 1973, the Industrial Waste Surcharge was added to the water bill for the first time. Bi-monthly accounts were billed for November. With the December billing, the remaining one half of the small accounts were billed the Industrial Waste fee. Actual collections for November were $3,341.27 and for December $37,976.10.

Task 4 Expansion of Treatment Plant Monitoring

The information derived from evaluations of Waste Discharge Reports provided valuable data pertaining to the constituents and concentrations of these constituents present in the waste streams of typical industrial dischargers.

Prior to program year 1973, the water pollution control plants had monitored influent for Suspended Solids, pH, BOD, Grease, Total Solids, Alkalinity, and Chlorides.

A $1.2 million pilot plant study had been awarded to Consulting Engineers, CH2M Hill, in late 1972 to determine the best process for treating San Francisco's raw sewage. Two tasks

of that study conducted in 1973 are directly related to the Industrial Waste Program; the first being the identification of influent characteristics within the seven basic categories of physical, nutrient, radio-active, heavy metals, pesticides, chemical, and bio-chemical. These seven categories cover over 108 separate parameters. The results for the high, low and average values of each parameter at each treatment plant are tabulated on Plate III-5 which appears on the following four pages.

Plate III-6 is a listing of selected constituent loadings ascertained by the Pilot Plant Study and a compilation of the industrial community contribution to those loadings as determined by WDR data. The industrial loadings are inflated, especially in the trace characteristics, by the reporting of test results on the WDR as "less than" the minimum concentration detectable by the test. This would account for the discrepancies for arsenic and total identifiable hydrocarbons.

The second of the tasks assigned CH2M Hill of direct concern to the City's Industrial Waste Program was to evaluate the efficiencies for constituent removal that would be reasonable to expect from each of the processes contemplated and recommend those constituents which can be most reliably controlled at the source or at the treatment plants.

Correlating the concentrations of specific constituents in the raw sewage and anticipated removal efficiencies will

PLATE III-5

INFLUENT ANALYSIS - PHYSICAL

CONSTITUENT	UNIT	SOUTHEAST HIGH	SOUTHEAST LOW	SOUTHEAST AVG COMP	NORTHPOINT HIGH	NORTHPOINT LOW	NORTHPOINT AVG COMP	RICHMOND-SUNSET HIGH	RICHMOND-SUNSET LOW	RICHMOND-SUNSET AVG COMP
COLOR	UNITS	210	75	120	138	60	69	192	80	109
CONDUCT.	U-MHO	5,220	2,160	4,653	2,001	100	1,800	1,360	625	752
FLOATABLES	MG/L	79.60	2.70	20.20	10.0	2.4	4.2	45.0	2.8	17.5
ODOR-RM T	TH-NO.	112,550.0	532.0	23,885.4	24,915.0	537.5	7,780.1	38,230.0	320.5	8,531.6
SETTLEABLE	MG/L	13.0	2.0	4.6	10.0	2.0	5.0	22.0	5.5	10.2
TOT DIS SOL	MG/L	2,940	1,114	2,092	1,010.0	386.0	881.2	449	183	345
TOT SOLIDS	MG/L	3,400	1,490	2,383	1,160	269	1,043	1,373	504	579
TOT SUS MAT	MG/L	462	150	290	480.0	107.1	162.7	1,047	155	208
TOT VOL SOL	MG/L	826	441	567	533	230	303	1,049	243	301
TURBIDITY	JTU	260	100	197	240	70	126	200	105	152
VOL SUS MAT	MG/L	380	136	235	422.0	100.5	145.9	1,017.0	94.0	192.9
TEMPERATURE	DEG-C	29.5	18.0	20.0	22.0	21.0	21.9	21.9	19.8	21.5

INFLUENT ANALYSIS - CHLORINATED HYDROCARBONS

CONSTITUENT	UNIT	SOUTHEAST HIGH	SOUTHEAST LOW	SOUTHEAST AVG COMP	NORTHPOINT HIGH	NORTHPOINT LOW	NORTHPOINT AVG COMP	RICHMOND-SUNSET HIGH	RICHMOND-SUNSET LOW	RICHMOND-SUNSET AVG COMP
LINDANE	UG/L	0.306	0.001	0.022	0.100	0.001	0.026	0.064	0.001	0.037
HPT-CL-EPOX	UG/L	0.007	0.001	0.002	0.039	0.001	0.001	0.905	0.001	0.037
DDE	UG/L	0.045	0.001	0.012	0.021	0.001	0.010	0.021	0.001	0.001
DDD	UG/L	0.037	0.001	0.007	0.091	0.001	0.008	0.057	0.001	0.012
DDT	UG/L	0.113	0.001	0.042	0.104	0.001	0.042	0.800	0.001	0.073
DIELDRIN	UG/L	0.025	0.001	0.005	0.024	0.001	0.003	0.020	0.001	0.004
TOT CL H.C.	UG/L	9.211	0.382	1.155	1.270	0.061	0.741	1.876	0.175	0.726
ALDRIN	UG/L	0.001	0.001	0.001	0.035	0.001	0.006	0.047	0.001	0.005
CHLORDANE	UG/L	0.035	0.001	0.007	0.161	0.001	0.024	0.196	0.001	0.101
ENDRIN	UG/L	1.000	0.001	0.004	0.011	0.001	0.002	0.062	0.001	0.001
HEPTACHLOR	UG/L	0.020	0.001	0.001	0.200	0.001	0.036	0.014	0.001	0.003
METHOXYCHLO	UG/L	0.056	0.001	0.010	0.261	0.001	0.043	0.058	0.001	0.009
TOXAPHENE	UG/L	1.000	0.001	0.158	0.080	0.001	0.006	0.020	0.001	0.006
ORG PHOSPH	UG/L	16.214	0.146	2.588	7.600	0.012	1.365	6.408	0.001	1.634
2-4-D	UG/L	4.063	0.100	0.551	1.241	0.175	0.460	1.379	0.057	0.354
PCB	UG/L	3.982	0.002	0.367	1.072	0.021	0.419	1.560	0.013	0.303
CARBAMATES	UG/L	0.152	0.001	0.018	0.561	0.001	0.065	0.455	0.001	0.092

PLATE III-5

INFLUENT ANALYSIS - RADIOACTIVE SUBSTANCES

CONSTITUENT	UNIT	SOUTHEAST HIGH	SOUTHEAST LOW	SOUTHEAST AVG COMP	NORTHPOINT HIGH	NORTHPOINT LOW	NORTHPOINT AVG COMP	RICHMOND-SUNSET HIGH	RICHMOND-SUNSET LOW	RICHMOND-SUNSET AVG COMP
GROSS ALPHA	PC/L	70	.10	24	28	3	17	5	2	4
GROSS BETA	PC/L	176	33	85	46	16	35	40	11	19
RADIUM 226	PC/L	0.20	0.02	0.12	0.70	0.03	0.09	0.20	0.03	0.13
STRONT. 90	PC/L	1.0	0.5	0.6	2.0	0.5	0.8	1.0	0.5	0.6

INFLUENT ANALYSIS - CHEMICAL AND BIOCHEMICAL

CONSTITUENT	UNIT	SOUTHEAST HIGH	SOUTHEAST LOW	SOUTHEAST AVG COMP	NORTHPOINT HIGH	NORTHPOINT LOW	NORTHPOINT AVG COMP	RICHMOND-SUNSET HIGH	RICHMOND-SUNSET LOW	RICHMOND-SUNSET AVG COMP
ACID(CACO3)	MG/L	165.0	8.2	29.9	38.0	1.0	22.8	37.0	9.6	19.7
ALKA(CACO3)	MG/L	266	72	175	209	133	143	206	138	152
BOD(5 DAY)	MG/L	412	126	235	282	130	176	210	128	161
BOD(ULTIM)	MG/L	1,300	320	521	930	220	386	860	290	461
BROMIDE	MG/L	13.00	0.10	3.32	2.60	0.10	0.69	0.45	0.10	0.10
CO2	MG/L	145.0	1.3	27.6	34.00	1.00	19.89	32.0	1.8	16.0
CHLORIDE	MG/L	1,250	326	985	403	80	366	244.0	49.0	94.0
COD	MG/L	1,550	471	782	696	363	472	2,480	420	575
DIS OXY	MG/L	4.30	0.00	2.61	4.30	0.50	2.71	4.10	0.10	3.31
FLUORIDE	MG/L	1.55	0.60	0.85	1.52	0.82	1.03	1.36	0.70	0.93
IODIDE	MG/L	0.018	0.001	0.003	0.032	0.001	0.003	0.046	0.001	0.004
OIL-GR(TOT)	MG/L	116.9	37.0	70.4	220.4	20.0	95.5	117	17	63
PH	UNIT	9.9200	6.2500	8.7314	9.6	7.4	8.8	9.20	7.60	8.37
PHENOLS	MG/L	1.975	0.054	0.346	0.205	0.020	0.043	0.419	0.038	0.082
SULFATE	MG/L	390	156	242	84	22	78	41	16	31
SULFIDE	MG/L	3.80	0.22	0.70	6.80	0.27	0.44	1.30	0.26	0.49
SULFITE	MG/L	13.0	2.0	3.8	4.0	2.0	2.6	4.1	1.6	2.3
SURFACTANTS	MG/L	9.3	6.0	7.4	9.6	4.3	6.7	11.5	4.6	9.7
TOT HARD	MG/L	560	210	459	220	100	198	140	70	91
TOT ORG CAR	MG/L	353	78	178	140	67	107	170	84	101

PLATE III-5

INFLUENT ANALYSIS - BIOASSAYS

		SOUTHEAST			NORTHPOINT			RICHMOND-SUNSET		
CONSTITUENT	UNIT	HIGH	LOW	AVG COMP	HIGH	LOW	AVG COMP	HIGH	LOW	AVG COMP
TLM-24 HR	%	90	35	88	92	35	79	92	70	85
TLM-48 HR	%	90	35	87	90	10	65	100	63	84
TLM-96 HR	%	90	35	86	96	35	82	100	58	81
SURVIVAL-24	%	100	0	44	100	0	41	90	0	36
SURVIVAL-48	%	100	0	41	100	0	36	80	0	23
SURVIVAL-96	%	100	0	39	100	0	34	70	0	19
TOXICITY	UNITS	2.86	0.00	0.90	2.86	0.00	0.98	1.72	0.87	1.21

INFLUENT ANALYSIS - NUTRIENTS

		SOUTHEAST			NORTHPOINT			RICHMOND-SUNSET		
CONSTITUENT	UNIT	HIGH	LOW	AVG COMP	HIGH	LOW	AVG COMP	HIGH	LOW	AVG COMP
AMMONIA-N	MG/L	40.0	11.2	15.6	30.0	8.8	12.3	39.0	13.4	18.5
NITRATE-N	MG/L	1.20	0.01	0.35	0.59	0.04	0.19	0.98	0.05	0.30
NITRITE-N	MG/L	0.61	0.01	0.17	0.84	0.01	0.05	0.04	0.01	0.02
ORGANIC-N	MG/L	48.0	8.0	21.6	39.0	7.0	20.2	71.0	5.4	22.7
TOTAL N	MG/L	70	25	37	49	16	33	105	21	41
ORTHO-P	MG/L	6.0	0.5	3.2	6.3	3.2	3.6	9.9	4.7	5.4
TOTAL-P	MG/L	15.0	5.6	7.9	8.5	5.3	6.2	12.5	6.3	8.2

PLATE III-5

INFLUENT ANALYSIS - HEAVY METALS

		SOUTHEAST			NORTHPOINT			RICHMOND-SUNSET		
CONSTITUENT	UNIT	HIGH	LOW	AVG COMP	HIGH	LOW	AVG COMP	HIGH	LOW	AVG COMP
ALUMINUM	UG/L	26,280	1,780	6,150	5,960	1,140	2,501	3,240	570	1,399
ANTIMONY	UG/L	270	17	138	120	20	70	80	10	27
ARSENIC	UG/L	7.4	2.2	5.0	11.5	0.7	4.5	7.0	1.6	3.8
BARIUM	UG/L	500	20	67	400	10	101	200	20	89
BERYLLIUM	UG/L	3.7	1.0	1.7	7.3	1.0	2.4	4.0	1.0	1.4
BISMUTH	UG/L	230	20	121	190	10	77	100	10	36
BORON	UG/L	1,470	120	829	1,260	160	607	390	100	254
CADMIUM	UG/L	6.0	1.0	2.6	68.0	1.0	7.7	6.0	0.6	1.1
CALCIUM	UG/L	63	38	50	30	19	27	20	15	16
CHROMIUM	UG/L	6,600	47	2,803	1,100	18	148	110	4	26
CR-6	UG/L	5	5	5	180.0	0.5	15.7	5	5	5
COBALT	UG/L	26.0	0.1	5.4	14.0	0.1	3.9	14.0	0.1	2.7
COPPER	UG/L	290	120	207	3,200	140	661	880	76	209
CYANIDE	MG/L	0.225	0.005	0.065	50.000	0.005	0.053	0.055	0.005	0.020
FE -2	UG/L	15,000	100	479	400	80	194	300	50	143
GOLD	UG/L	14.0	0.1	3.6	8.0	0.1	3.3	8.0	0.1	3.9
IRON	UG/L	16,080	1,040	4,331	4,100	1,120	2,127	2,070	540	1,261
LEAD	UG/L	760	50	212	520	30	77	180	32	79
LITHIUM	UG/L	23	10	15	100	5	34	10	4	7
MAGNESIUM	UG/L	153.10	40.63	123.87	59.02	17.75	49.60	22.84	5.36	16.42
MANGANESE	UG/L	220	150	183	100	61	78	99	34	54
MERCURY	UG/L	10.00	0.18	0.57	1.46	0.48	0.79	1.52	0.24	0.87
MOLYBDENUM	UG/L	220	10	18	8	3	7	3	1	2
NICKEL	UG/L	350	20	130	170	8	42	180	3	18
PHOSPORUS	UG/L	15,000	5,600	7,886	8,500	5,300	6,171	12,500	6,300	8,200
POTASSIUM	MG/L	69.0	17.0	50.3	34.00	0.26	26.86	25	5	15
SELENIUM	UG/L	41	4	14	100	2	31	50	6	15
SILICON	UG/L	69,630	4,610	13,491	17,260	6,750	9,591	12,980	3,260	6,823
SILVER	UG/L	48	14	30	390	29	48	64	13	23
SODIUM	MG/L	970	370	746	510	100	372	350	50	142
STRONTIUM	UG/L	790	310	506	370	110	229	130	31	100
THALLIUM	UG/L	220	100	184	80	30	67	200	10	47
TIN	UG/L	100	18	37	60	5	16	19	2	5
TITANIUM	UG/L	770	104	265	130	20	41	180	44	20
TUNGSTEN	UG/L	450	40	327	200	20	103	70	44	5
URANIUM	UG/L	10	1	5	6.0	0.9	3.6	10	4	1
VANADIUM	UG/L	50	10	16	30	10	15	50	16	10
ZINC	UG/L	48,000	240	1,147	460	240	397	480	229	160
ZIRCONIUM	UG/L	389	150	267	251	60	149	267	185	60

in the Southeast Water Pollution Control Plant's influent. Plate III-7 which follows this page depicts typical pH variations during September 1973.

The Industrial Waste Ordinance established limits for discharges of six wastewater constituents. They are: pH, phenols, dissolved sulfides, temperature, turbidity, and toxicity. Additionally, the Ordinance established fees for discharge of certain permitted wastewater constituents in excess of their concentrations in normal domestic sewage. These constituents are grease, suspended solids, and COD.

A review of waste discharge reports received from industries in the Southeast Drainage District combined with data developed as a result of the pH search, (described in detail within Task 7) pinpointed several contributors to the Southeast Treatment Plant's pH problem. These sources were requested by letter to correct their pH violation immediately (Appendix A).

The calculation of industries fair share of treatment costs is dependent upon firm data relative to total treatment cost. To date, the secondary treatment method to be used by the City for compliance with new discharge requirements has not been selected, consequently, this portion of Task 6 has not been completed. Data has been developed, however which reflects the need for source control of certain, industrial constituents because no known treatment process satisfactorily removes them.

provide good indications of the amount of source control that will be necessary excluding the direct requirements established by EPA's pretreatment guidelines.

Task 5 Educational and Informational Program

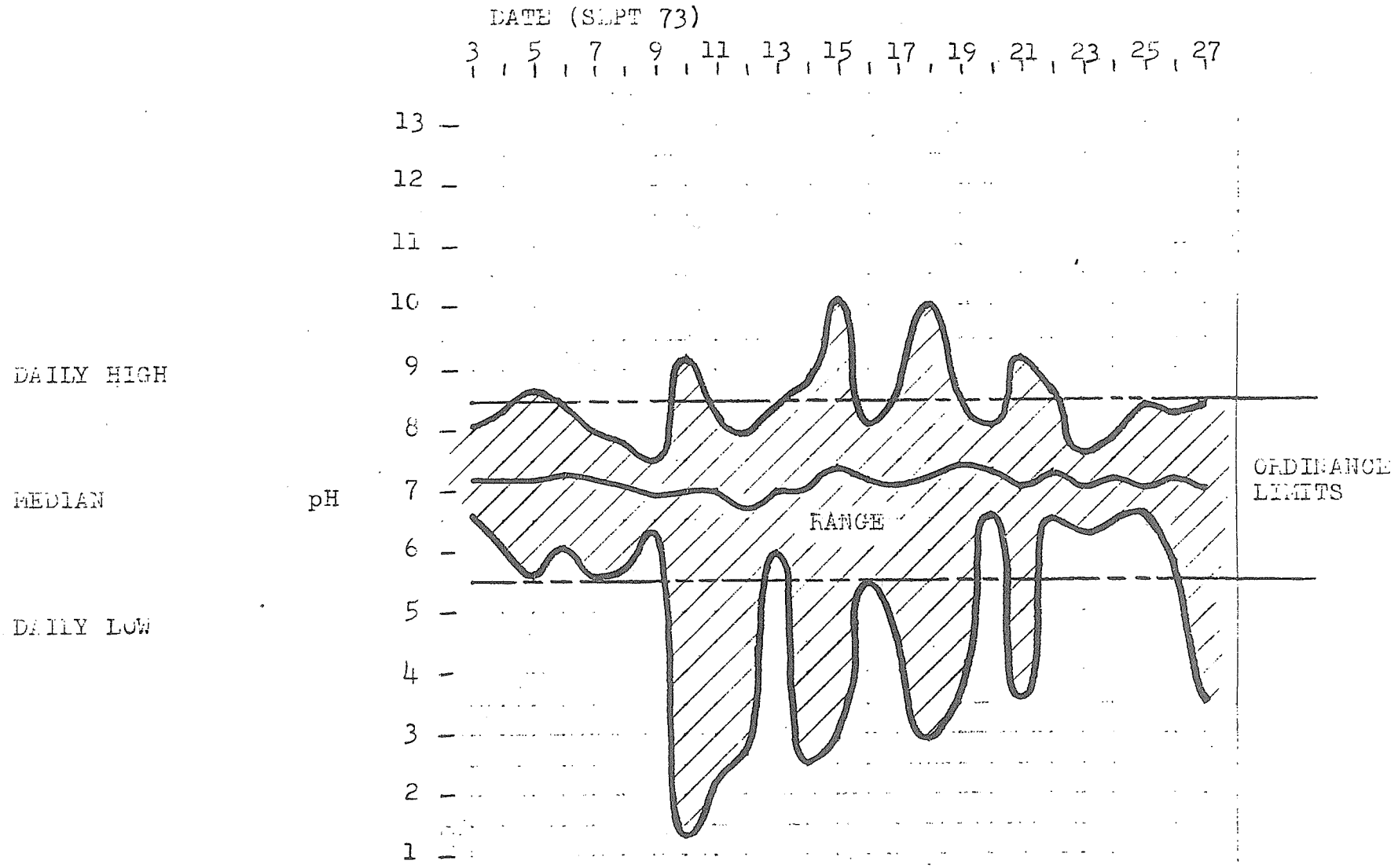
The objective of this task was to inform the industrial community of the goals and objectives of the Industrial Waste Program. However, aside from information released over the telephone or as a result of public contacts by inspectors, little was accomplished toward this objective. Insufficient staff and unanticipated occurences within other areas of the program were primarily responsible for this shortfall.

Task 6 Defining Maximum Limits Of Pollutant Discharges And Establishing Industries Fair Share Of Wastewater Management

San Francisco's wastewater management program is supported by a complex schedule of charges and tax assessments which are explained in greater detail within Chapter IV. The supposition that industry should pay its fair share of treatment facilities, and process costs and that certain discharges which are damaging either to the system or the process are best treated at the source is fundamental to the entire program. Program effort within Task 6 was directed toward establishment of maximum acceptable pollutant discharge levels and determination of "Fair Share" rates.

Pilot plant studies revealed wide pH and COD fluctuations

PLATE III-7


DATE (SEPT 73)
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DAILY HIGH
MEDIAN
DAILY LOW
pH
RANGE
ORDINANCE LIMITS

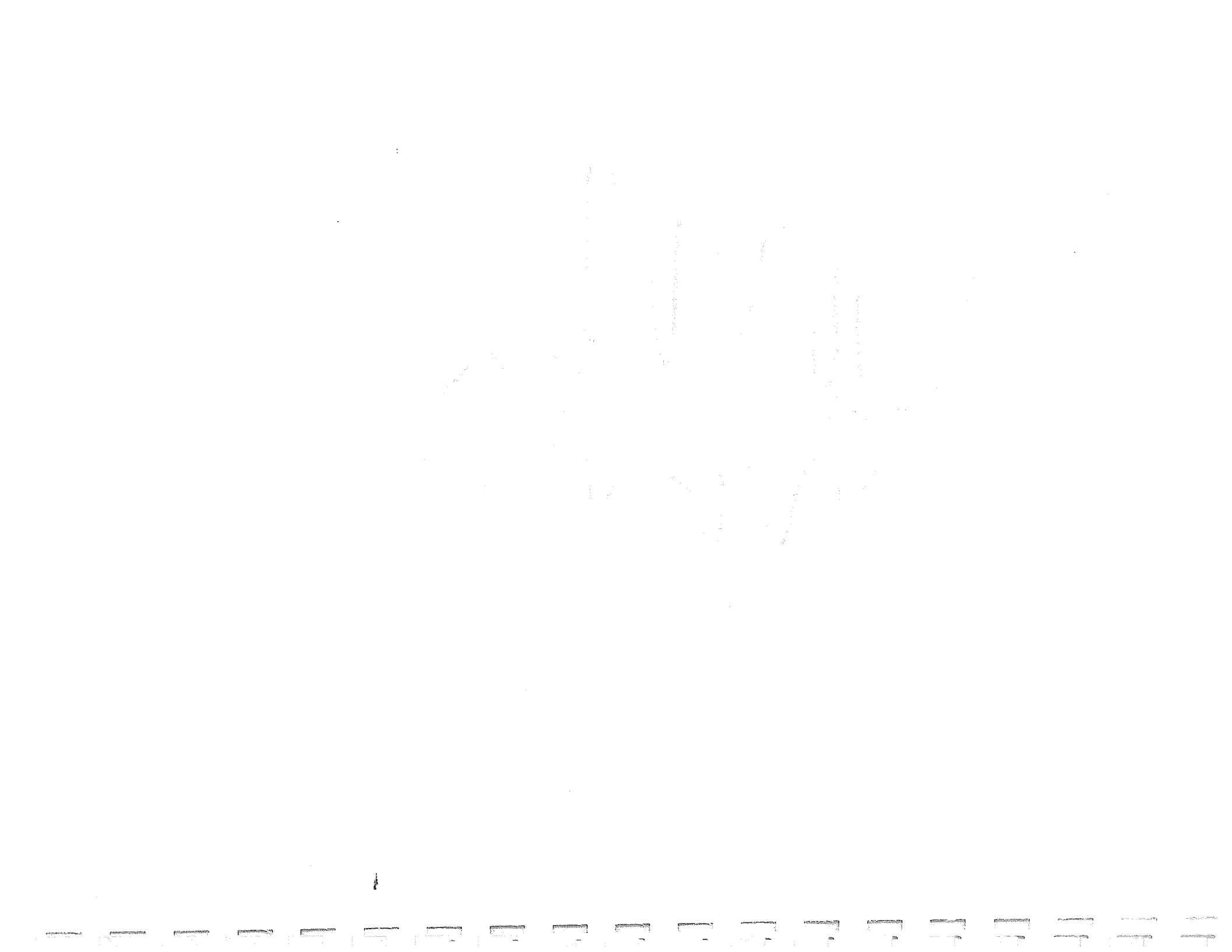
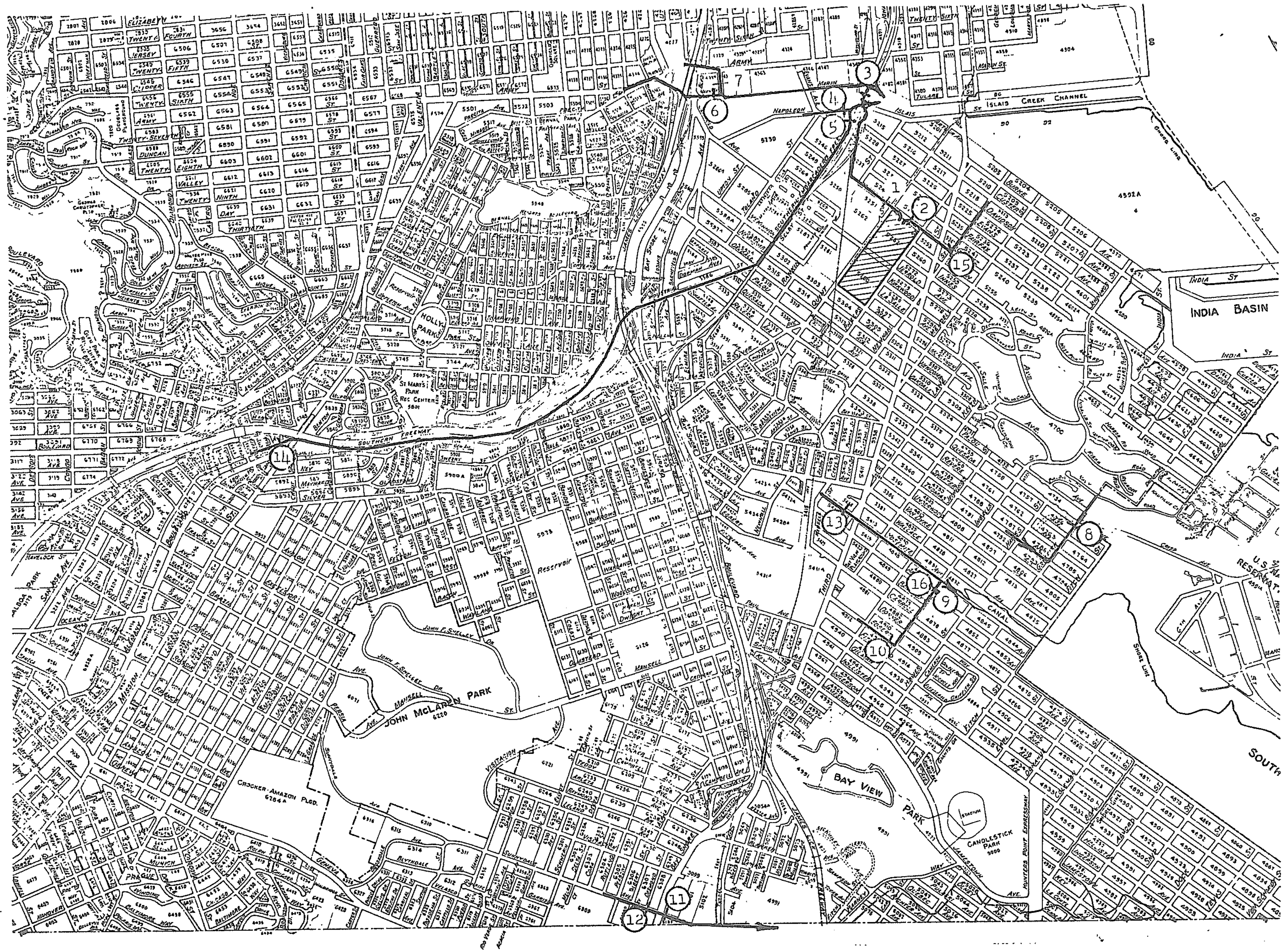


PLATE III-8



INDIA BASIN
BAY VIEW PARK
CANDLESTICK PARK
JOHN McLAREN PARK
HOLLY PARK
CROCKER-AMAZON PLGD.
ISLAIS CREEK CHANNEL
SOUTHERN FREEWAY
HUNTERS POINT EXPRESSWAY
Reservoir
St MARY'S PARK REC CENTER

Task 7 Enforcement and Surveillance Activities

Commencing mid 1973, major program emphasis was focused upon control of the wide pH variances attributable to industrial dischargers found in the Southeast drainage basin. pH control received early attention for several reasons. One, the health hazard extreme conditions presents to sewer maintenance personnel; secondly, the detrimental effect these corrosive solutions have upon sewer system and treatment facility equipment. Additionally, wide fluctuations of pH cannot be successfully tolerated by either present treatment methods or those most likely to be employed to achieve compliance with increased discharge requirements.

In order to determine the location and source of major pH violators, six crews sampled 14 locations of potential industrial discharge (See Plate III-8 on the following page). These points were sampled every ½ hour from 7:00 a.m. until 5:30 p.m. for one week.

The resulting samples were analyzed for the characteristics of pH and chlorides. Of the samples taken, 19 low pH (value 4) and 51 high pH (value 10) were recorded and 62 samples showed high chloride concentrations (values 71,000 mg/l). Results of this survey re-emphasized the need for a program of source control.

A formal City request made of 21 pH violators in July 1973

to institute a program that would assure compliance generated limited response and it became apparent that a more comprehensive approach was necessary. A copy of City's initial request may be found in Appendix A.

Program resources were directed to investigation of pH violators indicated by Waste Discharge Reports as not complying with discharge standards, and determining reasonable time schedules for industry groups to enact programs of source control.

Investigation of 5 firms, pinpointed by discharger WDR's indicating out of tolerance effluent, revealed that they had either installed or ordered equipment designed to bring them into compliance in response to the previously discussed informal request. These firms and the actions taken by them are summarized below.

Kortick Manufacturing Co. and Armor S.F. Galvanizing	Installed Ammonia Neutralization Systems
PICO Battery	Ordered Ammonia Neutralization System
Legallet Tanning Co.	Installed Equalization Tank with Aerators
St. Lukes Hospital	Found Source of pH Was Laundry and Changed Method of Operation

These firms were placed on self-monitoring status as provided for by the Ordinance. Those firms determined by the investigations to still be in violation were issued formal

notices of violation and the Industrial Waste personnel prepared recommendations to the Director for orders directing compliance with recommended time schedules for completion. These recommendations were adopted and orders issued to the 16 firms representing 8 industrial groups, shown on Plate III-9 which follows this page.

Task 8 Process Required For Appeals

During Program year 1973 no appeals were filed or heard under provisions of the Industrial Waste Ordinance.

Task 9 Revision to City Ordinances and Regulations

Although no revision to the City's Ordinance was undertaken during 1973 efforts were begun to record specific areas of the Ordinance requiring revision either because of ambiguity within the language or conflict with developing Federal or State guidelines.

Additionally, representatives of the Division participated in development of a model wastewater discharge ordinance under the auspices of the Bay Area Sewer Services Association (BASSA). This Ordinance which contains a major industrial waste section will be reviewed at a later date for its applicability to San Francisco's Industrial Waste Program and possible improvement of the Ordinance.

PLATE III-9

SIC Code	Establishment	Industry
2011	James Allan & Sons	Meat Packing Plants
2065	American Licorice Co.	Candy & Confectionery Product
2076	Cargill Inc.	Vegetable Oil Mills, Except Corn, Cottonseed
2793	Paramount Printing Plates Master Photoengraving Acme Photoengraving Walker Engraving Co. Graphic Arts Engraving Co.	Photo Engraving
3111	Legallet Tanning Metten & Gebhardt	Leather Tanning & Finishing
3462	Kortick Manufacturing Co.	Iron & Stell Forgings
3479	Armor Galvanizing	Coating, Engraving, and Allied Services
3691	Pico Battery MFG. Co C & D Industrial Batteries Trojan Batteries Inc.	Storage Batteries

FIRMS FILING WASTE DISCHARGE REPORTS

AS OF DECEMBER 31, 1973

FIRMS FILING WASTE DISCHARGE REPORTS

AS OF DECEMBER 31, 1973

SIC	TITLE	WATER CONSUMPTION UNIT/MONTH
2011	Meat Packing	
	James Allan & Sons	11000
2013	Sausage	
	George A Hormel & Co.	515
	Krey Meat Packing Co.	823
	Schwarz Sausage Co.	537
	Gallo Salame, Inc.	577
	Ever Good Sausage Co.	833
	C. J. Figone Co.	1086
	Oppenheimer Casing Co.	700
	J. Allan & Sons, Sausage Kitchen	1480
2021	Butter	
	Challenge Co.	440
	Sylvester Dairy Co.	150
	Gilt-Edge Creamery	20
2026	Milk	
	Arden Farms	1770
	Foremost	6820
	Spreckels Dairy Products	3620
	Green Glen Dairy Co.	460
	Sun Valley Dairy	280
2032	Canned Specialities	
	Mexican Food Products Corp.	230

SIC	TITLE	WATER CONSUMPTION UNIT/MONTH
2033	Canned Fruits, Veg	
	Juice-Pak	1030
2038	Fren. Specialities	
	O'Brien, Spotorno, Mitchell	3410
	Elena's Food Specialities, Inc.	90
2048	Feeds	
"	Feedstuffs Processing Co.	475
2051	Bakeries	
	Kilpatricks Bakeries	910
	Parisian Bakeries Inc.	700
	Larraboro Bros. Inc.	200
	Jack Horner	730
2065	Candy	
	Blum's	440
	American Licorice Co.	295
2066	Chocolate	
	Johnston, R.A. & Co.	130
2075	Soybean Prod.	
	Atomaya Co.	743
	Wo Chong Co.	855
	Wo Hop Co.	386
2076	Vegetable Oil	
	Cargill	13600
2077	Animal Fats.	
	Pacific Rendering Co.	170

SIC	TITLE	WATER CONSUMPTION UNIT/MONTH
2077	Royal Tallow And Soap Co., Inc.	1320
	Baker Commodities	220
	Western Calif. Products Co.	2410
2079	Margarine	
	Best Foods	7610
2082	Beer	
	Anchor Steam Beer Co.	221
	Theodore Hamm Co.	38800
	Luckey Breweries, Inc.	16500
	Falstaff Brewing Co.	17100
2083	Malt	
	Baver Schweiteer	3340
2085	Liquors	
	Lewis Westco & Co.	360
2086	Soft Drinks	
	Seven Up Bottling Co.	1620
	City Bottling Co.	80
	Blue Crest Beverages	60
2087	Flavorings	
	Eng Skell Co.	260
	Coca-Cola	2620
	Belfast Beverage Co.	430
2091	Canned Fish	
	Bell Smoked Fish	227
	A. Paladini, Inc.	647

SIC	TITLE	WATER CONSUMPTION UNIT/MONTH
2092	Fresh, Fren Fish	
	United Fish And Poultry Co.	110
2095	Roasted Coffee	
	Hills Bros. Coffee	790
	Safeway Stores, Inc., Coffee Div.	750
2099	Food Preparations	
"	Homestead Ravioli Co.	100
2261	Finished Fabric	
	Franciscan Fabrics	270
2752	Printing, Litho	
	Diamond International Corp.	660
	Balzer Shopes Litho Plate Co.	220
	Stecher Traung Schmidt	1070
	Gilmore Envelope	210
2793	Photo Engraving	
	Paramount Photo Engraving	20
	Master Photo Engraving	30
	Acme Photo Engraving Co.	30
	Walker Engraving Corp.	300
	Graphic Arts Engraving	130
	Johnson-Nassau Printing Co.	390
2795	Litho Plates	
	American Western Oraphics	60
2834	Pharmaceuticals	
	Robinson Laboratory	60
	Ingram Pharmaceutical	190

SIC	TITLE	WATER CONSUMPTION UNIT/MONTH
2841	Soap	
	Pioneer Soap Co.	360
2842	Disinfectants	
	Hexol Inc.	50
	Industrial Chemical Co.	100
2851	Paint	
	Glidden Paints	1300
2891	Adhesives	
	National Starch	490
3111	Leather Tanning	
	Legallet	13200
	Metten And Gerbhardt	140
3273	Concrete	
	Rhodes And Jamieson, LTD.	910
	Santa Cruz Cement	1480
	Kaiser Sand And Gravel	710
3341	Nonferrous Metals	
	American Smelting And Refining	1822
3411	Metal Cans	
	Western Can Co.	1658
3462	Ferrous Forgings	
	Kortick MFG Co.	100
3471	Electroplating	
	C And M Plating Works	1380
	J And J Plating Works	120
	Standard Plating And Polishing	280

SIC	TITLE	WATER CONSUMPTION UNIT/MONTH
3471	Laster Metal Finishes	720
	Schlage Lock Co.	15700
	Leedy Plating Works	1060
3479	Galvanizing	
	Armor S.F. Galvanizing	630
3691	Batteries	
	Pico Battery MFG. Co.	60
3731	Shipyards	
	Bethlehem Steel	2030
	U.S. Naval Shipyard	42600
4121	Taxi Cabs	
	Yellow Cab Co.	500
4131	Bus Lines	
	Continental Trailways Bus Syst.	180
4171	Bus Terminals	
	Grey Hound Bus Line	2364
4213	Trucking	
	Willig Freight Lines	90
4939	Utilities	
	Pacific Gas & Electric	8900
5085	Industrial Supplies	
	Bedini Steel Drum	240
5093	Scrap	
	Meagers Sons	70
	United Textile Co. - West	270

SIC	TITLE	WATER CONSUMPTIONS UNIT/MONTH
5144	Poultry Prod.	
	American Poultry Co.	433
5146	Fish Prod.	
	Harbor Fisheries	220
	F. Alioto Fish Co.	410
	Standard Fisheries	320
	A. Puccini & Sons	220
5147	Meat Prod.	
	Golden State Meats	380
	California Meat Co.	940
	Luce Quality Foods	310
	Luchetti Meats	80
5541	Gas Stations	
	C And P Service	324
7211	Power Laundries	
	New San Francisco Laundry	546
	New Process Laundry	3100
	Hotel Owners Laundry	1540
	Hayes Park Laundry	1600
7217	Carpet & Upholsterm	
	Turko-Persian RUG Co.	380
	Hampton Rug Service	130
	Supreme Rug Cleaning Co.	170
	Whitmores Rug & Upholstery	40

SIC	TITLE	WATER CONSUMPTION UNIT/MONTH
7218	Indst. Launderers	
	National Linen Service	3860
	Peninsula Linen Exchange	3250
	Sanitary Laundry Co.	990
7542	Car Washes	
	Rain Tunnel	400
	Seal Car Wash # 1	790
	Barnon Car Wash	510
	Bayshore Car Wash Inc.	280
	Bubble Machine	370
	Crest Car Wash	740
	Seal Car Wash # 2	500
	Automotive City Car Wash	320
	Lustre Wash	640
7699	Sanitary Services	
	Pacific Sanitary Company	43
8062	General Hospitals	
	Chinese Hospital	1300
	Children's Hospital	4390
	Franklin Medical Center	5400
	Goldengate Community Hospital	380
	Harkness Medical Center	2660
	Kaiser Foundation Hospital	3580
	University of Calif. Medical Center	26400
	Mount Zion Medical Center	6400
	Pacific Medical Center	2500

SIC	TITLE	WATER CONSUMPTION UNIT/MONTH
8062	St. Francis Hospital	4370
	St. Josephs Hospital	1860
	St. Lukes Hospital	3530
	St. Marys Hospital	4870
	U.S. Veterans Administration Hospital	6200
	Unity Hospital	510
	Letterman's General Hospital	6000
	French Hospital	3700
	U.S. Public Health Service	4300
8069	Speciality Hospitals	
	California Podiatry Hospital	380
	Hahnmann Hospital	1070
	S.F. Eye And Ear Hospital	220
	Shriners Hospital	180
	Garden Hospital	430

CHAPTER IV FUNDING

San Francisco's Industrial Community contributes to the revenue requirements of the City's water pollution control program in three ways:

(a) AD VALOREM TAXES:

These receipts are used principally to finance the operation and maintenance of water pollution plants and a portion of the sewer repair program.

(b) SEWER SERVICE CHARGE:

Increasingly stringent requirements placed upon the City by regulatory agencies dictate a rapid expansion of the capital improvement program associated with the City's water pollution control facilities. The urgency and size of the needed improvements dictate a program which is beyond the City's bonding capacity of 12% of assessed valuation to produce.

To meet this need, the electorate approved a charter amendment which permits the exclusion of Water Pollution Control bonds from the bonded indebtedness limit provided they are financed by sewer service charges.

The Board of Supervisors adopted a sewer service charge on August 23, 1971, subsequently amending it on May 15, 1972, and October 10, 1972.

Receipts from the sewer service charge have been used in their entirety to amortize the retirement of capital improvement bond issues.

(c) INDUSTRIAL WASTE REVENUE

This fee is calculated upon the amount and type of pollutants discharged by industries and is designed to off-set the added costs of removing these pollutants over and above treatment of domestic wastes. Additionally, receipts from this source and the Industrial Waste Inspection and monitoring fees are used to support the administration of the entire Industrial Waste Program.

GRANT PROGRAMS

Prior to 1972, grants played only a minor role in the San Francisco water pollution revenue picture; however, with the passage of the Federal Water Pollution Control Act 1972, the entire funding for water pollution control changed. Passage of the Act increased the Federal share of grant participation to 75% of eligible project costs. Subsequently, the State increased its share to 12½% making San Francisco eligible for grant funding at the 87½% level.

Public Law 92-500 contained several serious implications for industry. Throughout the entire legislative package is the mandatory requirement that industry pay its fair share of water pollution abatement costs.

Enforcement of this requirement is assured through the review process for grant eligibility. The Act mandates that applicants (municipalities) institute a system of user charges designed to distribute the operation and maintenance costs (O/M Costs) of water pollution abatement facilities and capital recovery for industry's contributing share equitably.

Additionally, the State has decreed that grant applicants' revenue programs must be designed as a total capital recovery program capable of maintaining wastewater treatment activities in a manner similar to that of self sustaining public utilities to insure that when such facilities reach obsolescence, new funds will not be required from either the State or Federal Government to replace grant funded facilities.

During program year 1973, the administration of the Industrial Waste Revenue Program was conducted independently of the Sewer Service Charge Program.

INDUSTRIAL WASTE REVENUE PROGRAM

Prior to January 1, 1973, approximately 7,000 Industrial Waste accounts had been identified and 4,000 of them had been billed the Industrial Waste Inspection Fee. Over 2,900 accounts had been excluded from the active billing register as either nondischargers, out of business, moved, or duplications, and the remaining 3,900 accounts paid $76,000.

Receipting and billing of the delinquent Industrial Waste Inspection fees for FY 71-72 proceeded and a reminder notice (Appendix C) was sent to more than 1,000 delinquent accounts in March 1973. These notices were accompanied by a letter of explanation which appears in Appendix C. As a result, $3,200 was received from accounts 180 days delinquent in payment of the Industrial Waste Inspection fee which accounted for over 850 accounts. Processing of the remaining 320 delinquent accounts was transferred to Bureau of Delinquent Revenues of the Tax Collector's Office effective November, 1973 (Appendix C). Revenues of approximately $28,000 were also received from Waste Discharge Report filing fees.

Billing of the Industrial Waste Inspection fee for FY 72-73 was commenced as the third quarter of 1973 began. Previously billing had been delayed until an automated Billing and Accounts Receivable Program could be developed. On August 7, 1973, 4,000 accounts were billed the annual Industrial Waste Inspection fee for 1973. This billing equaled a total of $71,656. Although 7,000 potential accounts were in the file at this time, many were excluded as their discharger status had not yet been determined.

The billing of this inspection fee was an automated process. The monies from this billing were received by the Industrial Waste Branch as provided for by the Ordinance, then receipted and transferred to the Bureau of Accounts

and then to the Central Permit Bureau. Credit maintenance forms were also made out as the payments were received and an accurate accounting of payments and adjustments fed into the automated accounting system.

Sixty days from the initial billing date, a reminder notice was automatically sent to all unpaid accounts listed in the computer file.

In December 1973, (120 days from the original FY 72-73 billing date) a penalty notice was sent to 610 accounts assessing penalties of $6,900 on delinquencies of $9,500. From this penalty notice, $3,000 was collected.

Total fiscal year 72-73 Industrial Waste Inspection fee collections equaled $58,000 and Industrial Waste Inspection Fee adjustments were made for approximately $9,000. Additional revenues of $8,000 were received from Waste Discharge Report filing fees.

Implementation of the Industrial Waste Surcharge billing based on the estimated or actual water consumption of dischargers was commenced at the beginning of the fourth quarter of 1973. The required hearings had been conducted to determine loadings based upon data extracted from Waste Discharge Reports, and notifications to dischargers of Surcharge fees had been mailed. In November, the surcharge was billed and December became the first complete billing month with bi-monthly accounts receiving

their second monthly bill. Billings should produce monthly revenues of approximately $47,000. A decrease in revenues may be anticipated as dischargers initiate pretreatment programs and file revised Waste Discharge Reports, however, this decrease may be partially off-set as new and/or undiscovered dischargers are included in the programs. Plate IV-1 summarizes financial activities of the Industrial Waste Program during Program year 1973.

PLATE IV-1

INDUSTRIAL WASTE PROGRAM REVENUE ACTIVITY STATEMENT

Calendar Year 1973

	1972		1973		Comparative Totals
	#	$	#	$	
Inspection Fee					
Billed	6,900	-	4,000	71,600	
Excluded	1,700		570	700	
Payments	2,900	50,000	2,820***	54,500	+4,500
Delinquent-120-Day					
Billed	2,300	-	610	16,400	
Excluded	500	-	225	8,300	
Payments	950	26,500	135***	3,100	-23,400
Delinquent-180-Day					
Billed			850		
Excluded			280		
Payments			250***	3,200	NCF*
Transfer to Delinquent Revenues			320	8,600	
Waste Discharge Report Filling Fee	90	43,000	80***	36,000	- 7,000
Surcharge			Nov.-Dec. Only		
Regular WD Billing	NB**	NB**		100,000	NCF*
Payments				41,000	NCF*
"600" Multi-Use Accts.	NB**	NB**	700	5,500	NCF*
Payments			-		
Self-Monitoring Fee					
Billed	NB**	NB**	NB**	0	
Payments					
TOTALS		119,500		***137,800	+18,300

*NCF - No Comparative Figures
**NB - Not Billed
*** - Revenue Items

SEWER SERVICE CHARGE

1973

The revenues from the Sewer Service Charge can be used for maintenance and operation of the sewerage system, to retire bond issues used to finance pollution control facilities, and for the costs of administration and collection of the charge. Such a user charge type revenue is necessary for the City to maintain its eligibility for State and Federal grants.

The Sewer Service Charge Ordinance was passed by the Board of Supervisors on August 23, 1971, with an effective date of September 1, 1971. Originally, it provided for a consumption charge equal to 74.55% of the water rate plus a unit service charge of $.84 per month for 1, 2 and 3 unit residential premises and $8.40 per month for all others. Services used exclusively for irrigation purposes were exempted from the Sewer Service Charge.

On October 13, 1972, the Ordinance was amended making the Sewer Service Charge for any user whose premises are used solely for dwelling purposes, a flat $.85 per month per dwelling unit. For users whose premises are used for other than dwelling purposes the rate shall be equal to 40% of the user's monthly charge based on meter size as tabulated on the following page:

Meter Size	1972 Monthly Unit Charge	*1973 Monthly Unit Charge
5/8"	$ 4.00	$ 2.50
3/4"	6.30	5.50
1"	9.60	10.00
1-1/2"	14.30	18.00
2"	16.80	29.00
3"	16.80	45.00
4"	16.80	55.00
6"	16.80	70.00
8"	16.80	90.00

Most industrial sewer service charges are computed on this basis, however, for those accounts where a combination of dwelling and non-dwelling units are serviced by a single meter service, the charge is as follows: $.85 per month for each dwelling unit contained in the residential portion of the premises plus 40 percent of the monthly charge for water delivered to the non-residential portion of the premises and a percentage of the above monthly unit (meter) charge for non-residential users. A fixed percentage was established for each of 2,250 mixed use accounts based on their water consumption records.

The amended ordinance which went into effect January 17, 1973, provided that no user, residential or non-residential, be charged if the amount of water delivered is 200 cubic feet or less per month.

Receipts from the Sewer Service Charge for Calendar Year 1972 totaled $7.8 million. Sixteen hundred (1600) personnel

mandays were expended in the implementation and administration of the charge. The staff processed 15,000 phone calls, handled 750 office visits by customers and answered 2,000 letters. Additionally, 1900 field inspections were conducted in response to customer's requests for change of billing status. These inspections resulted in 2,000 updates to the E.D.P. Master File, and, the issuing of 1,200 credits totaling approximately $25,000 resulting in refunds of $10,400.*

An experimental program was instituted in November 1972. Six hundred customers with closed accounts at the San Francisco Water Department showing paid water charges and unpaid Sewer Service charges were sent notifications from the Sewer Charge office stating the balance due. These notifications resulted in collections of $1,100 in one month. Monies received by the Sewer Service Charge Office were sent to the San Francisco Water Department Closed Account Section and applied to the corresponding accounts.*

The initial EDP printouts were received for the implementation of the 1973 amended Sewer Service Charge Ordinance, procedures for correlating Water Department and Assessor's Office data and the creation of a Master File for billing of the amended ordinance were established, and as of December 31, 1972, 31,000 multiple dwelling accounts were ready for billing

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* See Page 1 Part B. User Charge Activity Statement 1973.

14,400 additional multiple dwelling accounts were manually reviewed and entered for billing of the amended Ordinance during the first half of 1973.

The First Six Months Of The 1973 Calendar Year

Although the ordinance amendment went into effect in January, its full effects upon receipts were not apparent until the second half of the year, due to normal billing cycle conversion time lags.

Net collection for the first six months of 1973 totaled $4.4 million (Compared to the last half 1972 collections of $5.6 million) for a $1.2 million decrease in revenue. Plate IV-2 which follows this page compares monthly sewer charge revenue for the years 1972 and 1973.

750 personnel mandays were used in the implementation and administration of the Ordinance during the first six months of 1973. The staff processed 7,200 phone calls, handled 200 office visits by customers and answered 500 letters. Additionally 70 field inspections pertaining to 1972 billing status and requests for exemptions were conducted and collection activities under the experimental program were completed adding an additional $1,400 to the Sewer Service Charge Fund.*

Implementation of the 1973 Ordinance amendment resulted

* See Page 1 Part B. User Charge Activitiy Statement 1973.

in 800 Incorrect Billings through June 30, 1973 (See Forms SS 113 Appendix C). These errors necessitated 1,500 updates to the Sewer Service Change Master File, 50 refunds totaling $2,200, 500 credits totaling $5,900, and 1,000 debits totaling $6,300.*

Between March 1, 1973 and June 30, 1973, 10,100 delinquent accounts totaling $291,800 were dropped from the San Francisco Water Department computer file as provided for by Ordinance and transferred to the Sewer Service Charge Section for collection action. Collection was abandoned on 1400 of these accounts totaling $14,900. Abandonment occurred when the individual delinquency was under $1.05, no water was used, the customer was deceased, or the Water Department had already abandoned collection of charges and written them off per regulations of the Public Utilities Commission.

Due to errors in billing or processing revealed from the delinquency printouts, an additional 50 adjustments totaling $11,800 were made. Of the remaining 8,350 accounts, 4,100 letters were sent customers between June first and June 30, resulting in 250 payments totaling $7,100.* (See Forms SS 116 and SS 117). Thereupon, delinquency processing became a routine and continuing part of DPW's responsibility.

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* See Page I Part B. User Charge Activity Statement 1973.

200 Sewer Service accounts were found to have been underbilled according to provisions of the 1972 Ordinance and were prepared for backbilling. Additionally 300 new water accounts opened since the update of the Master File were reviewed, classified for future billing, and backbilled.

The Last Six Months of the 1973 Calendar Year

600 personnel mandays were used in the administration of the Ordinance during the second half of 1973. This reduction of 150 mandays from the preceding six months was due to staff fluctuation and the consolidation of duties of the section head and assistant section head. With the update and use of the Master File, the field inspection procedure using personnel of the Bureau's Street Inspection Section was terminated.

During the last six months of the calendar year, the staff processed 6,416 phone calls, handled 300 office visits by customers, and answered 400 letters. Additionally, 700 Incorrect Billing inquiries were received during the last six months of the calendar year, that resulted in 1,100 updates to the Sewer Service Charge Master, 600 credits totaling $14,000, and 600 debits totaling $12,700.*

Between July 1, 1972 and December 30, 1973, 7,400 delinquent accounts totaling $102,100 were dropped from the Water Department's computer file and returned to DPW for collection.

*See Page 1 Part B. User Charge Activity Statement 1973.

PLATE IV-2

SEWER CHARGES

Report of the Commercial Division of the San Francisco Water Department

1972

MONTH	AMOUNT
JANUARY	------
FEBRUARY	-0-
MARCH	8,328.92
APRIL	482,367.26
MAY	909,378.93
JUNE	783,204.82
SUB-TOTAL	$2,183,279.90
JULY	$ 915,113.10
AUGUST	944,115.69
SEPTEMBER	1,004,021.78
OCTOBER	869,385.60
NOVEMBER	1,174,284.08
DECEMBER	736,454.02
SUB-TOTAL	$5,643,374.27
TOTAL FOR YEAR	$7,826,654.17

1973

JANUARY	$1,116,875.91
FEBRUARY	766,430.84
MARCH	960,453.61
APRIL	535,772.14
MAY	599,851.83
JUNE	504,033.81
SUB-TOTAL	$4,483,417.14
JULY	$ 505,954.67
AUGUST	485,235.13
SEPTEMBER	465,464.94
OCTOBER	492,003.66
NOVEMBER	523,625.37
DECEMBER	426,648.70
SUB-TOTAL	$2,898,932.47
TOTAL FOR YEAR	$7,382,350.61

Collection was abandoned on 1,450 of these accounts totaling $22,700. Due to errors in billing or processing, an additional 100 adjustments totaling $3,300 were made. (Collections were abandoned and adjustments made according to the same criteria stated in the January-June portion of this report). The remaining 5,900 delinquencies combined with the 4,200 carried over from the first six months of the calendar year total 10,100. Notifications of impending action were mailed to 8,350 customers resulting in 1,407 payments totaling $26,150.*

Between October 19, 1973 and December 30, 1973, 1,100 accounts totaling $108,500 were transferred to the Bureau of Delinquent Revenue for collection action. As of December 30, 1973, 11,750 accounts totaling $199,400 on which customer notifications had been sent, awaited payment or transfer to the Bureau of Delinquent Revenue. It is hoped that approximately 3,000 delinquencies on open accounts (each under $10.00 and, because of the small amount due, not transferred to the Tax Collector), totaling $20,000 can be accumulated with subsequent delinquencies of the same customer for referral to the Tax Collector.

The staff also processed the accounts underbilled according to the provisions of the 1972 Ordinance. These underbilled accounts were added bi-monthly to the Water Bills through the debit procedure. This resulted in $9,800 additional net

*See Page 1 Part B. User Charge Activity Statement 1973.

collections for the last half of the calendar year.

240 new accounts were added to the Master File and were backbilled when necessary for the missed periods through the Incorrect Billing Procedure.* (See Form SS 113)

Sewer Service Charge revenue collection, delinquency action and update activities will be continued in 1974.

BUDGETING AND PERSONNEL INDUSTRIAL WASTE PROGRAM

The expansion of the City's Industrial Waste Program is reflected in the budgeting and personnel history. A comparison of budget allocations follows which shows increases each year as implementation of the program is furthered.

Year	Total Cost
1968-69	$ 33,700
1969-70	34,900
1970-71	75,600
1971-72	110,500
1972-73	154,000
1973-74	200,000 (Program Budget)
1974-75	398,966 (Program Budget)

Personnel has been the biggest factor and basic reason for increasing costs as shown in the budget history. Before adoption of the Ordinance, the Industrial Waste Program was

*See Page 1 Part B. User Charge Activity Statement 1973.

staffed by two employees; one an Industrial Waste Inspector, and another an Associate Civil Engineer, or Senior Chemist-Sewage Treatment. Ordinance implementation caused an increase of two Sewage Treatment Chemists, one Management Assistant, and one Clerk Stenographer.

Upon the Director's transfer of the Program from the Bureau of Water Pollution Control to the Bureau of Engineering, new staff additions were made which included one Senior Civil Engineer, two Junior Civil Engineers, two Junior Clerk Typists and two Account Clerks. Plate IV-3 which appears on the following page illustrates DPW Budget requests and approvals for 1973-1974 and the 1974-1975 request.

PLATE IV-3

BUDGET COMPARISON

INDUSTRIAL WASTE BRANCH

	1973-1974		1974-1975	
	DPW Request	Approved	DPW Request	Approved
Line Item Budget Staff	2	2	2	. . .
Program Budget - Total	$240,058	$200,000	$321,079	. . .
Water Dept. Services	(included in above amount)		54,981	
Accounting Dept. Services	(included in above amount)		14,336	. . .
GRAND TOTAL	$240,058	$200,000	$390,396	. . .

CHAPTER V - 1974 PROGRAM

In the past, activities of the Industrial Waste Branch have best been directed in priority task-type endeavors. Successful completion of these tasks have led to development of routine procedures responsible for the day-to-day operations of the program.

As outside regulatory agencies promulgate guidelines that require increased or new activity on the part of the City, within the scope of the Industrial Waste Program, priority task-types of activity will once again be utilized, however, the bulk of program resources will continue to be allocated to fulfillment of objectives in a routine manner.

Program objectives have been selected which further the broad goals established by the Ordinance. Basically these goals are; to provide for complete identification of industrial users, to enforce discharge limitations, and, to insure that industry contributes its fair share of water pollution abatement costs.

Objectives consistent with these goals have been established and are as follows:

A. Identify and Locate all Dischargers

Anticipated new staff resources will permit a canvassing of the City to complete the file of industrial dischargers

and confirm the accuracy of data pertaining to them. The anticipated methodology will take the form of both planned and incidental inspections. Planned inspection will be conducted on a district basis and will serve the purpose of locating industrial users previously overlooked. Incidental inspection, performed in the course of validating revenue information will be helpful in expanding and upgrading the programs information base. Basically a two-years plan with major initial emphasis on incidental inspections is contemplated.

Augmenting the canvass will be the circulation of a questionnaire designed to obtain information necessary for completion of the City's NPDES permit application section 4. This project will be shared with the Health Department of the City as much of the information required of industries by the Health Department to implement the intent of the occupational Safety Health Act, is of a similar nature and lends itself to collection at the same time.

Administratively, avenues will be investigated which will assist in the design of a mechanical system that will alert the Industrial Waste Branch of possible new sources of industrial pollution.

B. Enforce Controls on Discharge

By surveying submitted Waste Discharge Reports, individual and industry class violators of pH and sulphide concentrations

will be indicated, and enforcement of the ordinance provisions against them will be made. Violators are also expected to be revealed by incidental inspections and by WDR's requested by the Department.

As these violators are identified, time schedules ordering compliance will be processed. When violations are found within an industry that has a number of firms within the City, actions will continue to be performed on an industry-wide basis.

Monitoring of the influent to the Water Pollution Control Plants will continue as a measure of the effectiveness of source control and to indicate wastewater constituents which might become treatment problems should additional removal requirements be placed upon the City.

To provide for policing of known violators, additional sampling equipment is required.

This equipment, much of which is automatic and recording, will permit monitoring activities to be conducted over time with a minimum expenditure of staff resources.

An examination of equipment specifications, purchase of the equipment, training of department personnel in its operation, and determination of sites for its use, are all necessary steps in the field sampling component of the program.

C. Provide Information to the Industrial Community

The rapidly changing water pollution abatement scenario and the implications such changes portend for San Francisco's industrial community, strongly suggest establishment of an effective communication conduit between the Industrial Waste Branch and the City's industrial dischargers.

Meetings and conferences provide good opportunities for both the acquisition and dissemination of information.

These meetings should involve participants from Local, State, and Federal agencies, the Chamber of Commerce, Industrial associations and other interested industrial representatives. Channels should be established at such meetings which will develop positive public attitudes toward the Industrial Waste Program.

Additional effort will be placed in developing the Industrial Waste Technical library. This library will not remain solely as a reference to the program but also become of practical use to industry.

D. Determine Additional Discharger Limits

This objective requires coordination of other aspects of the program but work is hinged on the issuance of the NPDES permits to the City's three treatment plants. Evaluation of the permit requirements will permit more accurate determinations of areas where source control must be emphasized. Issuance of

this permit will in all probability require revision of the existing Ordinance.

Information on all source dischargers properly indexed and stored by the Department is essential not only to the City but to industry as well.

Many pretreatment standards imposed upon industry can be relaxed if the City is able to guarantee removal rates of specified pollutants sufficient to insure consistent compliance with NPDES mandates.

SUMMARY

The tasks and routines discussed in this chapter present a fair outline of anticipated program activities for 1974. Obviously, actions by outside agencies may alter anticipated program emphasis in the future, however, this objective orientated program approach provides for sufficient flexibility to meet these needs as they may arise.

PROGRAM STAFF AND ACKNOWLEDGEMENTS

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Industrial Waste Branch

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The editor wishes to acknowledge the contributions of members of the administrative, operational, and revenue sections of the Industrial Waste Branch, and the efforts of the clerical section, Division of Sanitary Engineering.

S.F. 1974

APPENDIX A

PUBLIC LAW 92-500 - (October 18, 1972) FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972

Excerpts that apply to Industrial Waste Program

"DEFINITIONS
"Sec. 212. As used in this title-

"(1) The term 'construction' means any one or more of the following: preliminary planning to determine the feasibility of treatment works, engineering, architectural, legal, fiscal, or economic investigations or studies, surveys, designs, plans, working drawings, specifications, procedures, or other necessary actions, erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works, or the inspection or supervision of any of the foregoing items.

"(2) (A) The term 'treatment works' means any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment, and their appurtenances; extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.
"(B) In addition to the definition contained in subparagraph (A) of this paragraph, 'treatment works' means any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste in combined storm water and sanitary sewer systems."

"Sec. 304. Information and Guidelines

"(f)(1) The Administrator shall publish guidelines for pretreatment of pollutant which he determines are not susceptible to treatment by publicly-owned treatment works.

"(2) The Administrator shall designate the category or treatment works to which the guidelines apply.

"(g) The Administrator shall promulgate guidelines establishing test procedures for the analysis of pollutants."

"NATIONAL STANDARDS OF PERFORMANCE
"Sec. 306. (a) For purposes of this section:

"(1) The term 'standard of performance' means a standard for the control of the discharge of pollutants

which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives including, where practicable, a standard permitting no discharge of pollutants.

"(2) The term 'new source' means any source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under this section which will be applicable to such source, if such standard is thereafter promulgated in accordance with this section.

"(3) The term 'source' means any building, structure, facility, or installation from which there is or may be the discharge of pollutants.

"(4) The term 'owner or operator' means any person who owns, leases, operates, controls, or supervises a source.

"(5) The term 'construction' means any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises.

"Sec. 307. Toxic and Pretreatment Effluent Standards

"(b) (1) The Administrator shall promulgate regulations establishing pretreatment standards for introduction of pollutants into treatment works (as defined in section 212 of this Act) which are publicly owned for those pollutants which are determined not to be susceptible to treatment by such treatment works or which would interfere with the operation of such treatment works. Pretreatment standards under this subsection shall specify a time for compliance not to exceed three years from the date of promulgation.

"(c) In order to insure that any source introducing pollutants into a publicly owned treatment works, which source would be a new source subject to section 306 if it were to discharge pollutants, will not cause a violation of the effluent limitations established for any such treatment works, the Administrator shall promulgate pretreatment standards for the category of such sources simultaneously with the promulgation of standards of performance under section 306 for the equivalent category of new sources. Such pretreatment standards shall prevent the discharge of any pollutant into such treatment works, which pollutant may interfere with, pass through, or otherwise be incompatible with such works.

"(d) After the effective date of any effluent standard or prohibition or pretreatment standard promulgated under this section, it shall be unlawful for any owner or operator of any source to operate any source in violation of any such effluent standard or prohibition or pretreatment standard.

"Sec. 502. General Definitions Except as otherwise specifically provided, when used in this Act.:

"(6) The term 'pollutant' means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

"(11) The term 'effluent limitation' means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.

"(12) The term 'discharge of a pollutant' and the term 'discharge of pollutants' each means (A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.

"(13) The term 'toxic pollutant' means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

"(14) The term 'point source' means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

"(15) The term 'biological monitoring' shall mean the determination of the effects on aquatic life, including accumulation of pollutants in tissue, in receiving waters due to the discharge of pollutants (A) by techniques and procedures, including sampling of organisms representative of appropriate levels of the food chain appropriate to the volume and the physical, chemical, and biological characteristics of the effluent, and (B) at appropriate frequencies and locations.

"(16) The term 'discharge' when used without qualification includes a discharge of a pollutant, and a discharge of pollutants.

"(17) The term 'schedule of compliance' means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.

"(18) The term 'industrial user' means those industries identified in the Standard Industrial Classification Manual, Bureau of the Budget, 1967, as amended and supplemented, under the category 'Division D--Manufacturing' and such other classes of significant waste producers as, by regulation, the Administrator deems appropriate.

"(19) The term 'pollution' means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

PRETREATMENT STANDARDS

EPA - 40 CFR 128 -- F.R. Nov 8, 1973
Effective: December 10, 1973

Authority: Federal Water Pollution Control Act Amendments of 1972 Sec. 307(b)

Definitions (from introduction)

Substantial Removal - Removals on the order of 80% or greater.
Minor Incidental Removal - Removals on the order of 10% to 30%.

Sec. 128.120 Definitions

128.121 Compatible Pollutant

For purposes of establishing Federal requirements for pretreatment, the term "compatible pollutant" means biochemical oxygen demand, suspended solids, pH and fecal coliform bacteria, plus additional pollutants identified in the NPDES permit if the publicly owned treatment works was designed to treat such pollutants, and in fact does remove such pollutants to a substantial degree.

128.122 Incompatible Pollutant

The term "incompatible pollutant" means any pollutant which is not a compatible pollutant as defined in 128.121.

128.123 Joint Treatment Works

Publicly owned treatment works for both non-industrial and industrial wastewater.

128.124 Major Contributing Industry

A major contributing industry is an industrial user of the publicly owned treatment works that; (a) Has a flow of 50,000 gallons or more per average work day; (b) has a flow greater than five percent of the flow carried by the municipal system receiving the waste; (c) has in its waste, a toxic pollutant in toxic amounts as defined in standards issued under section 307 (a) of the Act; or (d) is found by the permit issuance authority, in connection with the issuance of an NPDES permit to the publicly owned treatment works receiving the waste, to have significant impact, either singly or in combination with other contributing industries, on that treatment works or upon the quality of effluent from that treatment works.

128.125 Pretreatment

Treatment of wastewaters from sources before introduction into the joint treatment works.

128.131 Prohibited Wastes

No waste introduced into a publicly owned treatment works shall interfere with the operation or performance of the works. Specifically, the following wastes shall not be introduced into the publicly owned treatment works:

(a) Wastes which create a fire or explosion hazard in the publicly owned treatment works.
(b) Wastes which will cause corrosive structural damage to treatment works, but in no case waste with a pH lower than 5.0 unless the works is designed to accommodate such wastes.
(c) Solid or viscous wastes in amounts which would cause obstruction to the flow in sewers, or other interference with the proper operation of the publicly owned treatment works.
(d) Wastes at a flow rate and/or pollutant discharge rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency.

128.132 Pretreatment for Compatible Pollutants

Except as required by 128.131, pretreatment for removal of compatible pollutants is not required by these regulations. However, States and municipalities may require such pretreatment pursuant to section 307 (b) (4) of the Act.

128.133 Pretreatment for Incompatible Pollutants

In addition to the prohibitions set forth in 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry not subject to section 307 (c) of the Act shall be, for sources within the corresponding industrial or commercial category, that established by a promulgated effluent limitations guideline defining best practicable control technology currently available pursuant to sections 301(b) and 304(b) of the Act: Provided, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall be correspondingly reduced for that pollutant; and provided further that when the effluent limitations guideline for each industry category is promulgated, a separate provision will be proposed concerning the application of such guideline to pretreatment.

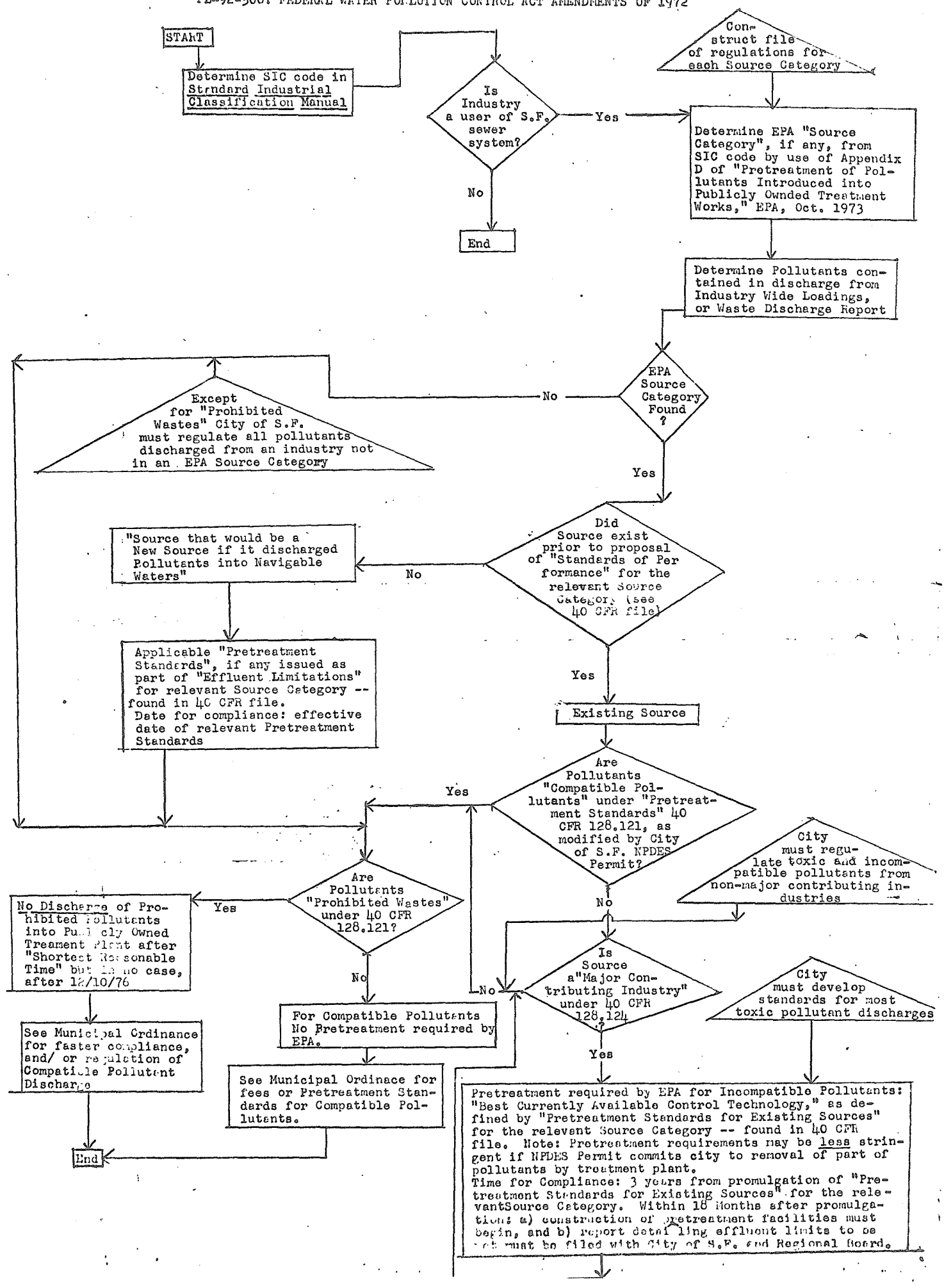
128.140 Time for Compliance

(a) Any owner or operator of any source to which the pretreatment standards required by this Part are applicable, shall be in compliance with such standards within the shortest reasonable time but not later than three years from the date of their promulgation; except that for 128.133, the three year compliance period for any user shall commence with the date of promulgation of a provision setting forth the application to pretreatment of the effluent limitations guidelines for the applicable industrial category.

(b) In order to ensure such compliance, each such owner or operator shall commence construction of any required pretreatment facilities within 18 months from the date of final promulgation of the provision required by 128.133. By the time construction is required to be commenced, each such owner or operator shall furnish to the NPDES permit program a report which shall set forth the effluent limits to be achieved by such pretreatment facilities and a schedule for the achievement of compliance with such limits by the required date. A copy of such report shall be furnished to the municipality or agency operating the publicly owned treatment works into which such pollutants are discharged.

(c) Nothing contained herein shall prevent any municipality or other agency from requiring more stringent compliance schedule, than are set forth in this part.

FLOW CHART TO DETERMINE PRETREATMENT STANDARDS FOR INDUSTRIAL SOURCES UNDER PL-92-500: FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972



federal register

WEDNESDAY, OCTOBER 17, 1973
WASHINGTON, D.C.

Volume 38 ■ Number 200

PART II

ENVIRONMENTAL PROTECTION AGENCY

■

EFFLUENT LIMITATION GUIDELINES

Glass Manufacturing

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 426]

EFFLUENT LIMITATION GUIDELINES

Proposed Rulemaking Concerning Glass Manufacturing

Notice is hereby given that effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources set forth in tentative form below are proposed by the Environmental Protection Agency (EPA) for the sheet glass manufacturing subcategory (Subpart B), the rolled glass manufacturing subcategory (Subpart C), the plate glass manufacturing subcategory (Subpart D), the float glass manufacturing subcategory (Subpart E), the automotive glass tempering subcategory (Subpart F), and the automotive glass lamination subcategory (Subpart G), of the glass manufacturing category of point sources pursuant to sections 301, 304 (b) and (c), 306(b) and 307(c) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316(b) and 1317(c); 86 Stat. 816 et seq.; P.L. 92-500) (the "Act").

(a) Legal authority:

(1) *Existing point sources.* Section 301(b) of the Act requires the achievement by not later than July 1, 1977, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of the Act. Section 301(b) also requires the achievement by not later than July 1, 1983, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of best available technology economically achievable which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 304(b) of the Act.

Section 304(b) of the Act requires the Administrator to publish regulations providing guidelines for effluent limitations setting forth the degree of effluent reduction attainable through the application of the best practicable control technology currently available and the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods, and other alternatives. The regulations proposed herein set forth effluent limitations guidelines, pursuant to section 304(b) of the Act, for the sheet glass manufacturing subcategory (Subpart B), the rolled glass manufacturing subcategory (Subpart C), the plate glass manufacturing subcategory (Subpart D), the float glass manufacturing subcategory (Subpart E), the automotive glass tempering subcategory (Subpart F), and the automotive glass lamination subcategory (Subpart G), of the glass manufacturing category.

(2) *New sources.* Section 306 of the Act requires the achievement by new sources of a Federal standard of performance providing for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

Section 306(b)(1)(B) of the Act requires the Administrator to propose regulations establishing Federal standards of performance for categories of new sources included in a list published pursuant to section 306(b)(1)(A) of the Act. The Administrator published in the FEDERAL REGISTER of January 16, 1973, (38 FR 1624) a list of 27 source categories, including the glass manufacturing category. The regulations proposed herein set forth the standards of performance applicable to new sources for the sheet glass manufacturing subcategory (Subpart B), the rolled glass manufacturing subcategory (Subpart C), the plate glass manufacturing subcategory (Subpart D), the float glass manufacturing subcategory (Subpart E), the automotive glass tempering subcategory (Subpart F) and the automotive glass lamination subcategory (Subpart G) of the glass manufacturing category.

Section 307(c) of the Act requires the Administrator to promulgate pretreatment standards for new sources at the same time that standards of performance for new sources are promulgated pursuant to section 306. Sections 426.15, 426.25, 426.35, 426.45, 426.55, and 426.65, proposed below provide pretreatment standards for new sources within the sheet glass manufacturing subcategory (Subpart B), the rolled glass manufacturing subcategory (Subpart C), the plate glass manufacturing subcategory (Subpart D), the float glass manufacturing subcategory (Subpart E), the automotive glass tempering subcategory (Subpart F), and the automotive glass lamination subcategory (Subpart G), of the glass manufacturing category.

Section 304(c) of the Act requires the Administrator to issue to the States and appropriate water pollution control agencies information on the processes, procedures or operating methods which result in the elimination or reduction of the discharge of pollutants to implement standards of performance under Section 306 of the Act. The Development Document referred to below provides, pursuant to section 304(c) of the Act, information on such processes, procedures or operating methods.

(b) Summary and Basis of Proposed Effluent Limitations Guidelines for Existing Sources and Standards of Performance and Pretreatment Standards for New Sources.

(1) *General methodology.* The effluent limitations guidelines and standards of performance proposed herein were developed in the following manner. The point source category was first studied for the purpose of determining whether separate limitations and standards are appropriate for different segments within the category. This analysis included a determination of whether differences in raw material used, product produced, manufacturing process employed, age, size, waste water constituents and other factors require development of separate limitations and standards for different segments of the point source category. The raw waste characteristics for each such segment were then identified. This included an analysis of (1) the source, flow and volume of water used in the process employed and the sources of waste and waste waters in the operation; and (2) the constituents of all waste water. The constituents of the waste waters which should be subject to effluent limitations guidelines and standards of performance were identified.

The control and treatment technologies existing within each segment were identified. This included an identification of each distinct control and treatment technology, including both in-plant and end-of-process technologies, which are existent or capable of being designed for each segment. It also included an identification of, in terms of the amount of constituents and the chemical, physical, and biological characteristics of pollutants, the effluent level resulting from the application of each of the technologies. The problems, limitations and reliability of each treatment and control technology were also identified. In addition, the non-water quality environmental impact, such as the effects of the application of such technologies upon other pollution problems, including air, solid waste, noise and radiation, was identified. The energy requirements of each control and treatment technology were determined as well as the cost of the application of such technologies.

The information, as outlined above, was then evaluated in order to determine what levels of technology constitute the "best practicable control technology currently available," "the best available technology economically achievable" and the "best available demonstrated control technology, processes, operating methods, or other alternatives." In identifying such technologies, various factors were considered. These included the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and other factors.

The data upon which the above analysis was performed included EPA permit applications, EPA sampling and inspections, consultant reports, and industry submissions.

The pretreatment standards proposed herein are intended to be complementary to the pretreatment standards proposed for existing sources under Part 128 of 40 CFR. The basis for such standards are set forth in the FEDERAL REGISTER of July 19, 1973, 38 FR 19236. The provisions of Part 128 are equally applicable to sources which would constitute "new sources," under section 306 if they were to discharge pollutants directly to navigable waters, except for § 128.133. That section provides a pretreatment standard for "incompatible pollutants" which requires application of the "best practicable control technology currently available," subject to an adjustment for amounts of pollutants removed by the publicly owned treatment works. Since the pretreatment standards proposed herein apply to new sources, §§ 426.15, 426.25, 426.35, 426.45, 426.55, and 426.65 below amend § 128.133 to require application of the standard of performance for new sources rather than the "best practicable" standard applicable to existing sources under sections 301 and 304(b) of the Act.

(2) Summary of conclusions with respect to the sheet glass manufacturing subcategory (Subpart B), rolled glass manufacturing subcategory (Subpart C), plate glass manufacturing subcategory (Subpart D), float glass manufacturing subcategory (Subpart E), automotive glass tempering subcategory (Subpart F), and automotive glass lamination subcategory (Subpart G), of the glass manufacturing category of point sources.

(i) *Categorization.* For the purpose of studying waste treatment and effluent limitations, the glass manufacturing industry was subcategorized into six subcategories. The first four deal with the actual manufacturing of glass, and the last two deal with the fabrication of glass into special products. The categories are as follows: rolled, sheet, plate and float glass manufacturing; and automotive glass tempering and automotive glass lamination. Other glass products such as architectural glass and specialty products are not covered by these regulations. Analysis of the process employed, waste water pollutants and waste control technologies justified the segmentation of the industry as described above. Factors such as age and size of plant did not justify further segmentation of the glass manufacturing source category.

(1) *Subpart B—Sheet Glass Manufacturing Subcategory.* Sheet glass is manufactured from sand, soda ash, limestone, dolomite, cullet, and other minor ingredients. These raw materials are mixed, melted in a furnace, and drawn vertically from a melting tank to form sheet glass. No process waste waters are generated from this process.

(2) *Subpart C—Rolled Glass Manufacturing Subcategory.* The same raw materials used in the manufacture of sheet glass are mixed, melted in a furnace, and cooled by rollers to form rolled glass. No process waste waters are generated from this process.

(3) *Subpart D—Plate Glass Manufacturing Subcategory.* The raw materials mentioned above in sheet glass manufacturing are mixed, melted in a furnace, pressed between rollers, and finally ground and polished to form plate glass. The waste waters generated from this process contain larger amounts of suspended solids than in any of the other subcategories.

(4) *Subpart E—Float Glass Manufacturing Subcategory.* The manufacture of float glass differs from that of plate glass in the use of a molten tin bath after the melting furnace. The float glass thus produced is of equal quality to that of plate glass and, therefore, does not require grinding or polishing. Process waste waters are generated from washing of the glass, and are relatively low in suspended solids.

(5) *Subpart F—Automotive Glass Tempering Subcategory.* This subcategory uses mostly float glass which is cut and then passed through a series of processes that grind and polish the edges, bend the glass, and then temper the glass to produce side and back windows for automobiles. Waste waters from these processes contain mainly suspended solids and oil.

(6) *Subpart G—Automotive Glass Lamination Subcategory.* This subcategory deals with the fabrication of automotive windshields. A typical windshield is fabricated by inserting a vinyl plastic sheet between two layers of glass, and then immersing the assembled windshield in an oil bath. Heat and pressure in the bath are used to complete the lamination. Process waste waters are generated from washing the glass pieces before lamination, washing the vinyl insert, washing the finished laminated windshields, and the seaming and cutting operations. The quantities of oil in the raw waste are substantially higher than in any of the other subcategories.

(ii) *Waste characteristics.* The significant pollutant parameters contained in waste waters resulting from the manufacture of flat glass and the fabrication of flat glass into automotive glass include: suspended solids, oil and grease, biochemical oxygen demand, chemical oxygen demand, phosphorous, and pH. Of the four basic glass manufacturing processes only float and plate glass produce process waste waters. Both sheet and rolled glass are lower quality glass and can be used directly without washing and other process waste waters. In all cases noncontact cooling water, boiler blowdown and incoming raw water pretreatment wastes associated with plants in this industry are not included in these effluent guidelines and standards of performance.

(iii) *Origin of waste water pollutants in the glass manufacturing subcategory.*—(1) *Sheet glass manufacturing subcategory.* There are no process waste waters associated with this subcategory.

(2) *Rolled glass manufacturing subcategory.* There are no process waste waste waters associated with this category.

(3) *Plate glass manufacturing subcategory.* Plate glass manufacturing generates large quantities of waste water pollutants, and volumes of waste waters. This subcategory of the industry has the highest raw waste load. However, the plate glass process is now being replaced by the float glass process. Only two plants exist at the present time and only one is expected to be in operation by 1977. The plate glass process utilizes the same basic manufacturing process as rolled glass but is followed by a grinding and polishing operation. Cool glass from the rolled process is passed through a series of grinding, polishing and rinsing operations which employ sand, emery, and rouge (or cerium oxide). Sedimentation and coagulation in large lagoons is necessary to remove the suspended solids. No plant at the present time has adequate treatment.

(4) *Float glass manufacturing subcategory.* Float glass manufacturing produces high quality glass without grinding and polishing. The glass is formed on a bed of molten tin and then cooled. Washing may then be required depending on customer requirements. The waste water generated contains suspended solids and oil. There is no treatment of this waste at the present time in the industry.

(5) *Automotive glass tempering subcategory.* Automotive glass tempering is a series of processes which produces automobile "back lights" (back windows) and "side lights" (side windows). Water is used in the fabrication processes for seaming, grinding, drilling, quenching, cooling and washing. Edge grinding requires an oil-water emulsion known as a "coolant solution." Waste from the operation is settled and skimmed and completely recycled to the process. However, oil adhering to the glass is carried over into subsequent washing steps and enters the waste water streams. An exemplary plant will have concentrations of 13 mg/l of oil and 100 mg/l of suspended solids in the combined waste streams from the processes mentioned above. No further treatment is now practiced.

(6) *Automotive glass lamination subcategory.* In the fabrication of automotive windshields, water is used for cooling, seaming and washing of the glass, and for washing of the plastic sheet before insertion between two sheets of glass. All major windshield manufacturers presently use oil autoclaves and the oil process is considered typical. Oil adhering to the glass after lamination must be washed off and this causes the major pollution problem in this subcategory. The best post lamination washing method is a hot water wash. This reduces the requirements for detergents in some cases by 95 percent. The hot water wash is treated by air flotation and other oil separation methods. This treated waste stream is combined with the wash waters from the cutting and seaming operations, washing of the vinyl sheets, and the final rinse after lamination. The resultant waste contains oil, suspended solids, surfactants and phosphates. No further treatment is presently practiced.

(iv) *Treatment and control technology.* The treatment and control techniques described below are either presently practiced by the industry; such as coagulation, sedimentation, oil separation, pH control, etc.; or easily transferable technology, such as diatomaceous earth filtration.

(v) *Treatment and control technology within subcategories.* Waste water treatment and control technologies have been studied for each subcategory of the industry to determine what is: (a) The best practicable control technology currently available, (b) the best available technology economically achievable, and (c) the best available demonstrated control technology, processes, operating methods or other alternatives.

(1) *Treatment in the sheet and rolled glass manufacturing subcategories.* No process wastes are associated with rolled and sheet glass manufacturing. Therefore, no treatment is necessary for these subcategories.

(2) *Treatment in the plate glass manufacturing subcategory.* Waste treatment in the plate glass subcategory was found to be uniformly inadequate. The data examined showed excessive fluctuations in effluent quality that can be controlled by demonstrated technology and operational procedures. The recommended limitations can be met by partitioning existing one-celled lagoons into two cells with polyelectrolyte addition at the entrance to each cell. This will provide more efficient coagulation and reduce the effects of short circuiting and wind action on sedimentation. Effluent levels in terms of concentration from a typical plant would be 30mg/l, a reduction in raw waste load of 99.8%.

The best available technology economically achievable for the plate glass subcategory will further reduce the effluent levels recommended for the 1977 standards to 5 mg/l for a typical plant. This can be accomplished by recycling 80 percent of the lagoon effluent to the grinding operation, sand filtration of the remaining 20 percent and return of the filter backwash to the head of the lagoon system. The recycled effluent will have a higher quality than the river water presently being used in most cases and therefore reuse should be technically feasible.

(3) *Treatment in the float glass manufacturing subcategory.* The best practicable control technology currently available for the float glass subcategory is elimination of detergents in the float washer. Exemplary plants utilizing this in-house control were examined in developing the limitations. Although no further treatment of these wastes is practiced in the industry, the effluent levels for a typical plant of 15 mg/l suspended solids and 0.5 mg/l phosphorous are low. Further treatment is not considered to be best practicable control technology currently available.

The best available technology economically achievable for the float glass subcategory is no discharge of process waste water pollutants to navigable waters. With elimination of detergents in in the float washer, the waste water will be of sufficient quality to be recycled as batch water or cooling tower makeup. Batch water is used to control dust in the mixing of the raw materials for glass and is evaporated in the furnace.

(4) *Treatment in the automotive glass tempering subcategory.* In the automotive glass tempering subcategory no treatment is presently practiced in the industry. To meet the limitations mentioned above, known coagulation and sedimentation technologies from other industries will be necessary. The effluent quality from a typical plant using the recommended best practicable control technology currently available will be approximately 25 mg/l. Although the recommended limitations do not assume any oil removal, coagulation and sedimentation should remove a portion of the oil and result in an effluent concentration of less than the 13 mg/l of oil.

In addition to the technologies described for the 1977 limitations, the 1983 limitations for the automotive glass tempering subcategory will require diatomaceous earth filtration. Waste solids will be disposed of in a landfill. Effluent oil and suspended solids should be reduced to well below the 5 mg/l used to determine the limitations. However, no data is available to suggest a lower value. Sand filtration may also be able to achieve the limitations above. Some development by the industry will be necessary to determine the best alternative.

(5) *Treatment in the automotive glass lamination subcategory.* The best practicable control technology currently available for the windshield fabrication subcategory represents technology presently practiced by some plants in the industry. This technology is a modification of the post lamination washer sequence to provide a continuously recycling initial hot water rinse, oil removal by centrifugation of the recirculating hot rinse water, recycle of oil back to the process, and treatment of the post lamination rinse waters by gravity oil separation.

The best available technology economically achievable for the windshield fabrication subcategory is diatomaceous earth filtration in addition to the best practicable control technology currently available. The overall reduction for these technologies will be over 99 percent for oil, and 80 percent for suspended solids for a typical plant. Further reduction of COD over the 1977 levels was considered not to be economically achievable.

With the exception of the plate glass subcategory, the standards of performance for new sources are the same as the 1983 limitations requiring the best available technology economically achievable. New sources in the plate glass subcategory should achieve no discharge of process waste water pollutants to navigable waters. This regulation will most probably prevent the construction of any new plate glass plants. The float process can produce a glass of equal quality more economically and with almost no water pollution. For this reason, the no discharge effluent limitations attainable for new float glass manufacturing sources should also be applied to new plate glass manufacturing sources.

(vi) *Cost estimates for control of waste water pollutants in the glass manufacturing category.* The costs and energy requirements associated with the control and treatment technologies have been considered. The costs for inplant controls are largely those associated with capital investment for process and equipment modifications and are minimal when compared to total plant investment. It is estimated that the investment costs of achieving the 1977 limitations by all plants in the industry is less than $900,000 excluding costs of additional land acquisition. The costs of achieving the 1983 level is estimated to be an additional $2,300,000 over the 1977 level.

Added energy requirements for the treatment technologies recommended for the subcategories producing glass are less than 1 percent of the daily energy requirements for a typical plant. It is less than 10 percent for automotive glass fabrication plants. The larger percentage is not due to higher energy requirements for treatment, but because of lower overall energy requirements of the fabrication plants.

(vii) *Establishing daily maximum limitations.* The daily maximum limitations for the effluent characteristics for each subcategory are no more than 2.0 times the 30 day limitations. These limitations were based on an analysis of the data gathered during the preparation of the Development Document.

(viii) *Non-water quality environmental impact.* The principal non-water quality environmental impact attributable to the control and treatment technologies proposed is disposal as a solid waste of the sludge generated in the various sedimentation and filtration technologies. With the exception of the plate glass subcategory, the volume of sludge generated is small. In the solid tempered automotive glass subcategory the typical volume produced is estimated to be 0.38 cu m/day (13.5 cu ft/day). Where diatomaceous earth filters are used, the estimated production of solid waste is less than 0.23 cu m/day (8 cu ft/day). No significant addition to plate glass solid wastes will result from the recommended technologies. All of the sludges resulting from the flat glass segment are innocuous and should require only minimal custodial care in disposal sites.

(ix) *Economic impact analysis.* A study conducted by EPA has concluded that the proposed effluent limitations will not seriously threaten the economic viability of the Flat Glass Industry. In fact, there will be no production, employment, community, balance of trade or industry growth effects due to the proposed effluent limitations. Price increases ranging from 0.0 to the 0.4 percent are expected to be reflected in almost negligible price increases.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Flat Glass Segment of the Glass Manufacturing Point Source Category" details the analysis undertaken in support of the regulations being proposed herein and is available for inspection in the EPA Information Center, Room 227, West Tower, Waterside Mall, Washington, D.C., at all EPA regional offices, and at State water pollution control offices. A supplementary analysis prepared for EPA of the possible economic effects of the proposed regulations is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by the proposed regulations, or who have placed themselves on a mailing list for this purpose (see EPA's Advance Notice of Public Review Procedures, 38 FR 21202, August 6, 1973). An additional limited number of copies of both reports are available. Persons wishing to obtain a copy may write the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman.

(c) *Summary of public participation.* Prior to this publication, the agencies and groups listed below were consulted and given an opportunity to participate in the development of effluent limitations guidelines and standards proposed for the glass manufacturing category. All participating agencies have been informed of project developments. An initial draft of the Development Document was sent to all participants and comments were solicited on that report. The following are the principal agencies and groups consulted: (1) Effluent Standards and Water Quality Information Advisory Committee (established under section 515 of the Act); (2) All State and U.S. Territory Pollution Control Agencies; (3) Ohio River Valley Sanitation Commission; (4) New England Interstate Water Pollution Control Commission; (5) Delaware River Basin Commission; (6) Hudson River Sloop Restoration, Inc.; (7) Conservation Foundation; (8) Environmental Defense Fund, Inc.; (9) Natural Resources Defense Council; (10) The American Society of Civil Engineers; (11) Water Pollution Control Federation; (12) National Wildlife Federation; (13) The American Society of Mechanical Engineers; (14) U.S. Department of Commerce; (15) U.S. Department of the Interior; (16) Ford Motor Company; (17) PPG Industries, Inc.; (18) Libbey-Owens-Ford Company; (19) ASG Industries, Inc.; (20) Glass Containers Manufacturers Institute; (21) C. E. Glass Co.; (22) Fourco Glass Company; (23) Guardian Industries; (24) Safelite Industries; (25) Shatterproof Glass Corporation; (26) Chrysler Corp.; (27) Safetee Glass Co. Inc.; and (28) United States Water Resources Council.

The following organizations responded with comments: (1) ASG Industries Inc.; (2) Libbey-Owens-Ford Company; (3) Ford Motor Company; (4) PPG Industries, Inc.; (5) Illinois Environmental Protection Agency; (6) Delaware River Basin Commission; (7) Department of Commerce; (8) California State Water Resources Control Board; (9) New York State Department of Environmental Conservation; (10) Texas Water Quality Board; (11) Pennsylvania Department of Environmental Resources; and (12) U.S. Department of the Interior.

The primary issues raised in the development of these proposed effluent limitations guidelines and standards of performance and the treatment of these issues herein are as follows:

(1) A general criticism was made on the exclusion of auxiliary wastes, such as noncontact cooling water, boiler water treatment, etc., from the guidelines. This exclusion was said to make the application of guidelines difficult when issuing discharge permits. EPA considered this problem when the study was initiated. However, at that time it was decided that since these auxiliary wastes are common to many industries, it would be appropriate to apply separate guidelines for these generic wastes. The size and extent of these waste waters would require more extensive study than was possible in the development of the initial guidelines.

(2) Another comment was that in some cases not all products from multi-product plants were covered. Guidelines will be prepared later for all products not presently covered by the proposed regulations in this document.

(3) A common question was the technical feasibility of the 1983 no discharge standard for float glass. Objection was made to the suggestion that float glass wash water could be disposed of by use in batch make-up, and as make-up for cooling water. It was claimed that oil and dissolved solids in the wash water would interfere with cooling tower operation. Also, water can not always be added to the batch make-up because in some cases liquid caustic is used. These comments were considered carefully and are answered in the Development Document as follows: (i) The amount of oil found in the wash water during the sampling program carried out by EPA was very low, ranging from 1 to 3 mg/l and should not cause any problem in the cooling tower; (ii) The dissolved solids content in cooling water will increase because of the addition of wash water, but the cooling tower make-up water should result in only a slightly higher blowdown rate; and (iii) during the industry survey, EPA did not find any instance of the use of liquid caustic in glass batch make-up; however, if liquid caustic must be used when soda ash is not available, the use of dry caustic would permit the addition of the wash water to the batch make-up.

(4) The elimination of detergents from float glass washer by 1977 was objected to by the float glass industry. The main reason was the necessity for higher quality glass in the light and heat reflecting glass manufacturing operations. While EPA recognizes this need, the guidelines refer only to the manufacture of float glass. If subsequent detergent washing is needed, this can be carried out during fabrication of the special products mentioned. EPA is now developing guidelines for those products not included in the regulations proposed in this document.

(5) Industry also claimed that the cost of implementing the proposed regulations are much higher than reported by EPA in the Development Document. The EPA cost figures have been developed from the best available information supplied by industry and the literature. EPA has reexamined the cost data and economic impacts and found that these data substantiate the reasonableness of the proposed regulations. No alternative cost breakdown was supplied by the industry.

(6) The regulations for the plate glass manufacturing subcategory were criticized as the polishing of plate glass may not be carried out simultaneously with grinding. This results in much higher loadings to the treatment systems during certain times, allegedly resulting in higher final effluent concentrations. Also the raw waste loadings vary depending on the glass thickness being ground. When thinner glass is being ground, the raw waste loadings will be higher than during manufacture of thicker glass. The average raw waste loadings reported by EPA in the Development Documents were questioned. The data reported and standard's numbers recommended by EPA are from averages of data supplied by industry. Simple coagulation and sedimentation in lagoons of proper design will handle surges in raw waste loads and volumes.

(7) It was claimed that consultant's studies have shown that multi-stage lagoons (as suggested by EPA) can not attain 30 mg/l of suspended solids in the final effluent, with concentrations of 50 to 100 mg/l claimed to be more realistic. It must be pointed out that no plant within the industry is practicing exemplary treatment. Lagoons often are overloaded, affected by wind action (due to poor design) and lack adequate routine removal of settled solids. During periods of good operation, effluent concentrations of less than 30 mg/l are obtained. With proper operation and modest design changes this effluent concentration can be attained routinely.

Interested persons may participate in this rulemaking by submitting written comments in triplicate to the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman. Comments on all aspects of the proposed regulations are solicited. In the event comments are in the nature of criticisms as to the adequacy of data which is available, or which may be relied upon by the Agency, comments should identify and, if possible, provide any additional data which may be available and should indicate why such data is essential to the development of the regulations. In the event comments address the approach taken by the agency in establishing an

effluent limitation guideline or standard of performance, EPA solicits suggestions as to what alternative approach should be taken and why and how this alternative better satisfies the detailed requirements of sections 301, 304(b), 306, and 307 of the Act.

A copy of all public comments will be available for inspection and copying at the EPA Information Center, Room 227, West Tower, Waterside Mall, 401 M Street SW., Washington, D.C. A copy of preliminary draft contractor reports, the Development Document and economic study referred to above, and certain supplementary materials supporting the study of the industry concerned will also be maintained at this location for public review and copying. The EPA information regulation, 40 CFR Part 2, provides that a reasonable fee may be charged for copying.

All comments received by November 16, 1973, will be considered. Steps previously taken by the Environmental Protection Agency to facilitate public response within this time period are outlined in the advance notice concerning public review procedures published on August 6, 1973 (38 FR 21202).

Dated October 3, 1973.

JOHN QUARLES,
Acting Administrator.

PART 426—EFFLUENT LIMITATIONS GUIDELINES FOR EXISTING SOURCES AND STANDARDS OF PERFORMANCE AND PRETREATMENT STANDARDS FOR NEW SOURCES FOR THE GLASS MANUFACTURING POINT SOURCE CATEGORY

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Subpart B—Sheet Glass Manufacturing Subcategory

§ 426.10 Applicability; description of sheet glass manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which several mineral ingredients, sand, soda ash, limestone, dolomite, cullet and other ingredients, are mixed, melted in a furnace, and drawn vertically from a melting tank to form sheet glass.

§ 426.11 Specialized definitions.

For the purposes of this subpart:

(a) The term "process waste water" shall mean any water which, during the manufacturing process, comes into direct contact with any raw material, intermediate product, by-product or product used in or resulting from the manufacture of sheet glass.

(b) The term "process waste water pollutants" shall mean pollutants contained in process waste waters.

(c) The term "cullet" shall mean any broken glass generated in the manufacturing process.

§ 426.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best practicable control technology currently available by a point source subject to the provisions of this subpart: no discharge of process waste water pollutants to navigable waters.

§ 426.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart: no discharge of process waste water pollutants to navigable waters.

§ 426.14 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants by a new point source subject to the provisions of this subpart: No discharge of process waste water pollutants to navigable waters.

§ 426.15 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the sheet glass manufacturing subcategory which is an industrial user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to navigable waters), shall be the standard set forth in Part

128, 40 CFR, except that for the purposes of this section, § 128.133, 40 CFR shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 426.14, 40 CFR Part 426, provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall be correspondingly reduced for that pollutant."

Subpart C—Rolled Glass Manufacturing Subcategory

§ 426.20 Applicability; description of rolled glass manufacturing subcategory.

The provisions of this subpart are applicable to discharge resulting from the process in which several mineral ingredients, sand, soda ash, limestone, dolomite, cullet, and other ingredients are mixed, melted in a furnace, and cooled by rollers to form rolled glass.

§ 426.21 Specialized definitions.

For the purposes of this subpart:

(a) The term "process waste water" shall mean any water which, during the manufacturing process, comes into direct contact with any raw material, intermediate product, by-product or product used in or resulting from the manufacturing and processing of rolled glass.

(b) The term "process waste water pollutants" shall mean pollutants contained in process waste waters.

(c) The term "cullet" shall mean any broken glass generated in the manufacturing process.

§ 426.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best practicable control technology currently available by a point source subject to the provisions of this subpart: no discharge of process waste water pollutants to navigable waters.

§ 426.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart: no discharge of process waste water pollutants to navigable waters.

§ 426.24 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants by a new point source subject to the provisions of this subpart: no discharge of process waste water pollutants to navigable waters.

§ 426.25 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the rolled glass manufacturing subcategory which is an industrial user of a publicly owned treatment works, (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to navigable waters), shall be the standard set forth in Part 128, 40 CFR, except that for the purposes of this section, § 128.133, 40 CFR shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 426.24, 40 CFR Part 426, provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall be correspondingly reduced for that pollutant."

Subpart D—Plate Glass Manufacturing Subcategory

§ 426.30 Applicability; description of plate glass manufacturing subcategory.

The provisions of this subpart are applicable to discharge resulting from the process in which several mineral ingredients, sand, soda ash, limestone, dolomite, cullet and other ingredients are melted in a furnace, pressed between rollers, and finally ground and polished to form plate glass.

§ 426.31 Specialized definitions.

For the purposes of this subpart:

(a) The term "process waste water" shall mean any water which, during the manufacturing process, comes into direct contact with any raw material, intermediate product, by-product or product used in or resulting from the manufacturing and processing of plate glass.

(b) The term "process waste water pollutants" shall mean pollutants contained in process waste waters.

(c) The term "cullet" shall mean any broken glass generated in the manufacturing process.

(d) The following abbreviations shall have the following meanings: (1) "TSS" shall mean total suspended nonfilterable solids; (2) "COD" shall mean chemical oxygen demand; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and (5) "lb" shall mean pound(s).

§ 426.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best practicable control technology currently available by a point source subject to the provisions of this subpart:

Effluent characteristic	*Effluent limitations*
TSS	Maximum for any one day 2.76 kg/kkg of product (5.52 lb/ton). Maximum average daily values for any period of thirty consecutive days 1.38 kg/kkg of product (2.76 lb/ton).
COD	Maximum for any one day 0.90 kg/kkg of product (1.80 lb/ton). Maximum average daily values for any period of thirty consecutive days. 0.45 kg/kkg of product (0.90 lb/ton).
pH	Within the range of 6.0 to 9.0.

§ 426.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

Effluent characteristic	*Effluent limitations*
TSS	Maximum for any one day 0.045 kg/kkg of product (0.090 lb/ton).
COD	Maximum for any one day 0.09 kg/kkg of product (0.018 lb/ton).
pH	Within the range of 6.0 to 9.0.

§ 426.34 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants by a new point source subject to the provisions of this subpart: no discharge of

process waste water pollutants to navigable waters.

§ 426.35 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the plate glass manufacturing subcategory which is an industrial user of a publicly owned treatment works, (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to navigable waters), shall be the standard set forth in 40 CFR Part 128. Section 128.133 shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 426.34, 40 CFR Part 426, provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall be correspondingly reduced for that pollutant."

Subpart E—Float Glass Manufacturing Subcategory

§ 426.40 Applicability; description of float glass manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which several mineral ingredients, sand, soda ash, limestone, dolomite, cullet, and other ingredients are mixed, melted in a furnace, and floated on a molten tin bath to produce float glass.

§ 426.41 Specialized definitions.

For the purpose of this subpart:

(a) The term "process waste water" shall mean any water which, during the manufacturing process, comes into direct contract with any raw material, intermediate product, by-product or product used in or resulting from the manufacturing and processing of float glass.

(b) The term "process waste water pollutants" shall mean pollutants contained in process waste waters.

(c) The term "cullet" shall mean any broken glass generated in the manufacturing process.

(d) The term "oil" shall mean any substances extractable by the standard procedure using petroleum ether.

(e) The term "phosphorous" shall mean total phosphorous.

(f) The following abbreviations shall have the following meanings: (1) "TSS" shall mean total suspended nonfilterable solids; (2) "COD" shall mean chemical oxygen demand; (3) "g" shall mean gram(s); (4) "kkg" shall mean 1,000 kilograms; and (5) "lb" shall mean pound(s).

§ 426.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best practicable control technology currently available by a point source subject to the provisions of this subpart:

Effluent characteristic	*Effluent limitations*
TSS	Maximum for any one day 2.0 g/kkg of product (0.004 lb/ton).
COD	Maximum for any one day 2.0 g/kkg of product (0.004 lb/ton).
Oil	Maximum for any one day 0.7 g/kkg of product (0.0014 lb/ton).
Phosphorus	Maximum for any one day 0.05 g/kkg of product (0.0001 lb/ton).
pH	Within the range of 6.0 to 9.0.

§ 426.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart: no discharge of process waste water pollutants to navigable waters.

§ 426.44 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants by a new point source subject to the provisions of this subpart: no discharge of process waste water pollutants to navigable waters.

§ 426.45 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the float glass manufacturing subcategory which is an industrial user of a publicly owned treatment works, (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to navigable waters), shall be the standard set forth in 40 CFR, Part 128, except that for the purposes of this section, § 128.133, 40 CFR shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 426.44, 40 CFR Part 426, provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works should be correspondingly reduced for that pollutant."

Subpart F—Automotive Glass Tempering Subcategory

§ 426.50 Applicability; description of the automotive glass tempering subcategory.

The provisions of this subpart are applicable to discharges resulting from the processes in which glass is cut and then passed through a series of processes that grind and polish the edges, bend the glass, and then temper the glass to produce side and back windows for motor vehicles.

§ 426.51 Specialized definitions.

For the purposes of this subpart:

(a) The term "process waste water" shall mean any water which, during the manufacturing process, comes into direct contact with any raw material, intermediate product, by-product or product used in or resulting from the manufacturing and processing of tempered automotive glass.

(b) The term "process waste water pollutants" shall mean pollutants contained in process waste waters.

(c) The term "tempering" shall mean the process whereby glass is heated near the melting point and then rapidly cooled to increase its mechanical and thermal endurance.

(d) The term "oil" shall mean any substances extractable by the standard procedure using petroleum ether.

(e) The following abbreviations shall have the following meanings: (1) "BOD5" shall mean biochemical oxygen demand measured after a five day incubation period; (2) "TSS" shall mean total suspended nonfilterable solids; (3) "g" shall mean gram(s); (4) "sq m" shall mean square meter; (5) "lb" shall mean pound(s); and (6) "sq ft" shall mean square feet.

§ 426.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best practicable control technology currently available by a point source subject to the provisions of this subpart:

Effluent characteristic	*Effluent limitations*
TSS	Maximum for any one day 1.95 g/sq m of product (0.40 lb/1,000 sq ft). Maximum average of daily values for any period of thirty consecutive days 1.22 g/sq m of product (0.25 lb/1,000 sq ft).
BOD	Maximum for any one day 0.73 g/sq m of product (0.15 lb/1,000 sq ft).
Oil	Maximum for any one day 0.61 g/sq m of product (0.13 lb/1,000 sq ft).
pH	Within the range of 6.0 to 9.0

§ 126.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

Effluent characteristic	*Effluent limitations*
TSS	Maximum for any one day 0.24 g/sq m of product (0.05 lb/1,000 sq ft).
BOD	Maximum for any one day 0.49 g/sq m of product (0.10 lb/1,000 sq ft).
Oil	Maximum for any one day 0.24 g/sq m of product (0.05 lb/1,000 sq ft).
pH	Within the range of 6.0 to 9.0.

§ 126.54 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants by a new point source subject to the provisions of this subpart:

Effluent characteristic	*Effluent limitations*
TSS	Maximum for any one day 0.24 g/sq m of product (0.05 lb/1,000 sq ft).
BOD	Maximum for any one day 0.49 g/sq m of product (0.10 lb/1,000 sq ft).
Oil	Maximum for any one day 0.24 g/sq m of product (0.05 lb/1,000 sq ft).
pH	Within the range of 6.0 to 9.0

§ 126.55 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the automotive glass tempering subcategory which is an industrial user of a publicly owned treatment works, and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to navigable waters), shall be the standard set forth in 40 CFR Part 128, except that for the purposes of this section, § 128.133 shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 426.54, 40 CFR Part 426, provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall be correspondingly reduced for that pollutant."

Subpart G—Automotive Glass Lamination Subcategory

§ 126.60 Applicability; description of automotive glass lamination subcategory.

The provisions of this subpart are applicable to discharges resulting from the processes which laminate a plastic sheet between two layers of glass, and which prepare the glass for lamination such as cutting, bending, and washing, to produce laminated automotive glass.

§ 126.61 Specialized definitions.

For the purposes of this subpart:

(a) The term "process waste water" shall mean any water which, during the manufacturing process, comes into direct contact with any raw material, intermediate product, by-product or product used in or resulting from the manufacturing and processing of laminated automotive glass.

(b) The term "process waste water pollutants" shall mean pollutants contained in process waste waters.

(c) The term "oil" shall mean any substances extractable by the standard procedure using petroleum ether.

(d) The term "phosphorous" shall mean total phosphorous.

(e) The following abbreviations shall have the following meanings: (1) "TSS" shall mean total suspended nonfilterable solids; (2) "g" shall mean gram(s); (3) "sq m" shall mean square meter; (4) "lb" shall mean pound(s); (5) "sq ft" shall mean square feet; and (6) "COD" shall mean chemical oxygen demand.

§ 126.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best practicable control technology currently available by a point source subject to the provisions of this subpart:

Effluent characteristic	*Effluent limitations*
TSS	Maximum for any one day 4.4 g/sq m of product (0.90 lb/1,000 sq. ft).
COD	Maximum for any one day 4.9 g/sq m of product (1.0 lb/1,000 sq ft).
Oil	Maximum for any one day 1.76 g/sq m of product (0.36 lb/1,000 sq ft).
Phosphorous	Maximum for any one day 0.98 g/sq m of product (0.20 lb/1,000 sq ft).
Ph	Within the range of 6.0 to 9.0

§ 126.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

Effluent characteristic	*Effluent limitations*
TSS	Maximum for any one day 0.88 g/sq m of product (0.18 lb/1,000 sq ft).
COD	Maximum for any one day 4.9 g/sq m of product (1.0 lb/1,000 sq ft).
Oil	Maximum for any one day 0.88 g/sq m of product (0.18 lb/1,000 sq ft).
Phosphorous	Maximum for any one day 0.20 g/sq m of product (0.04 lb/1,000 sq ft).
pH	Within the range of 6.0 to 9.0.

§ 126.64 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable a standard permitting no discharge of pollutants by a new point source subject to the provisions of this subpart:

Effluent characteristic	*Effluent limitations*
TSS	Maximum for any one day 0.88 g/sq m of product (0.18 lb/1,000 sq ft).
COD	Maximum for any one day 4.9 g/sq m of product (1.0 lb/1,000 sq ft).
Oil	Maximum for any one day 0.88 g/sq m of product (0.18 lb/1,000 sq ft).
Phosphorus	Maximum for any one day 0.20 g/sq m of product (0.04 lb/1,000 sq ft).
pH	Within the range of 6.0 to 9.0.

§ 426.63 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the automotive glass lamination subcategory which is an industrial user of a publicly owned treatment works, (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to navigable waters), shall be the standard set forth in Part 128, 40 CFR, except that for the purposes of this section, § 128.133, 40 CFR shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 426.64, 40 CFR, Part 426, provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall be correspondingly reduced for that pollutant."

[FR Doc.73-21666 Filed 10-16-73;8:45 am]

EPA CRITICAL INDUSTRIES

LIST

C.	TITLE	NO. OF FIRMS In Group	W.D.R.**	WATER USAGE IN GROUP 100 ft^3
	Malt Liquors* (1)	3	3	49857
	Prepared Animal Feed* (1)	1	1	400
	Leather Tanning* (1)	2	2	18000
	Meat Packing* (1)	1	1	10700
3	Vebetable Oils*	1	1	32000
1	Rendering Plants*	4	4	18000
3	Sausages*	20	5	9900
5	Shortening - Veg. Oils*	1	1	7900
L	Creamery Butter*	2	2	1200
2	Soybean Oil Mills*	2	2	390
L	Electroplating*	9	9	22867
L	Shipbuilding*	3	3	6200
L	Paints*	7	7	2934
0	Primary Smelting-nonferrous*	1	1	3000
3	Metal Coating*	3	3	435
L	Storage Batteries*	3	3	112
5	Ind. Supplies (barrel cleaning)	1	1	175
6	Fluid Milk*	6	6	10241
6	Soft Drinks*	5	5	5400
7	Flavoring Extracts*	6	4	4100
3	Malt*	1	1	3800
1	Candy*		4	2671
5	Coffee, roasting*	6	4	2900
6	Wet corn milling*	1	1	440
1	Power Laundries	23	9	30000
1	Bread Bakery Products	71	7	10326

WASTE DISCHARGE REPORT

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF WATER POLLUTION CONTROL

A ORGANIZATION

1. NAME OF ORGANIZATION DISCHARGING WASTEWATER

5. SIC CODE NUMBER ☐☐☐☐

2. ADDRESS OF WASTEWATER DISCHARGE POINT (IF DIFFERENT FROM MAILING ADDRESS)

ZIP

6. NUMBER OF EMPLOYEES AT DISCHARGE LOCATION

WEEKDAYS	
SATURDAY	
SUNDAY	

3. TELEPHONE

4. NAME OF INDIVIDUAL RESPONSIBLE FOR WASTEWATER DISPOSAL

TITLE

7. HOURS OF DAY DURING WHICH DISCHARGE OCCURS ☐ TO ☐

B ACTIVITY

IF A COMMERCIAL OR PROFESSIONAL ORGANIZATION, STATE NATURE OF BUSINESS; IF AN INDUSTRY, STATE NATURE OF BUSINESS, RAW MATERIALS, PRODUCTS, WASTE MATERIALS AND A GENERAL PROCESS DESCRIPTION.

1. DESCRIPTION

2. USE AND DISPOSITION OF WATER QUANTITY (RECORD IN GALLONS PER DAY)

PURPOSE	SUPPLY FROM		DISCHARGE TO	
	S.F. WATER DEPT.	OTHER * (1)	SANITARY SEWER	OTHER * (2)
COOLING WATER				
BOILER FEED				
PROCESS				
WASH DOWN				
EMPLOYEE SANITARY				
OTHER * (3)				
TOTAL				

OTHER * (1) ☐ WELL ☐ BAY ☐ RECLAIMED WATER

(2) ☐ WELL ☐ BAY ☐ RAIL, TRUCK OR BARGE

(3) DESCRIBE

3. LIST SAN FRANCISCO WATER DEPARTMENT ACCOUNT NUMBERS

____ – ____ – ____	____ – ____ – ____
____ – ____ – ____	____ – ____ – ____
____ – ____ – ____	____ – ____ – ____

4. AVERAGE MONTHLY WATER USAGE FOR THE PAST 12 MONTHS SAN FRANCISCO WATER DEPARTMENT — HUNDRED CUBIC FEET [ ]

5. AVERAGE MONTHLY WATER USAGE FOR THE PAST 12 MONTHS OTHER SOURCES OF WATER (SEE B-2) — HUNDRED CUBIC FEET [ ]

6. DISCHARGE REPORT FEE — FROM 4 AND 5 ABOVE COMPUTE YOUR DISCHARGE FEE: $2.00 PER HUNDRED CU FT: MINIMUM $100 AND MAXIMUM $600 — $ [ ]

7. TREATMENT GIVEN TO WASTE BEFORE DISCHARGE TO SANITARY SEWER SYSTEM
(CHECK AND DESCRIBE PRESENT TREATMENT PRACTICES)

☐ NONE ☐ HOLDING TANK ☐ CHEMICAL ☐ GREASE TRAP ☐ SEDIMENTATION
☐ GRINDING ☐ SCREENING ☐ pH ADJUSTMENT ☐ OIL SEPARATOR ☐ BIOLOGICAL
☐ OTHER DESCRIPTION :

8. WASTEWATER FLOW RATE	PEAK HOURLY GAL/MINUTE	MAXIMUM DAILY GAL/DAY	AVERAGE DAILY GAL/DAY		AVERAGE ANNUAL GAL/DAY
			SEASONAL MAXIMUM	SEASONAL MINIMUM	

9. IF SEASONAL VARIATION EXISTS, RECORD THE MONTHS

SEASON OF MAXIMUM FLOW RATE FROM _____ TO _____
SEASON OF MINIMUM FLOW RATE FROM _____ TO _____

C WASTE DISCHARGE FEE CONSTITUENTS

DAY OF WEEK	WASTE DISCHARGE GAL/DAY	CONCENTRATION, mg/l		
		GREASE	SUSPENDED MATTER	CHEMICAL OXYGEN DEMAND
SUNDAY				
MONDAY				
TUESDAY				
WEDNESDAY				
THURSDAY				
FRIDAY				
SATURDAY				
TOTAL				
WEIGHTED AVERAGE (BY FLOW)				

D CHARACTERISTIC CONSTITUENTS

		UNITS	TEST RESULTS			UNITS	TEST RESULTS
1	pH	unit		9	CYANIDE	mg/l	
2	TEMPERATURE	°F		10	SULFIDE	mg/l	
3	AMMONIA as N	mg/l		11	PHENOLS	mg/l	
4	KJELDAHL NITROGEN as N	mg/l		12	TURBIDITY	JTU	
5	NITRATE as N	mg/l		13	FISH BIOASSAY TOXICITY 96 hr. TLm50 (STICKLEBACK FISH)	%	
6	NITRITE as N	mg/l					
7	TOTAL PHOSPHORUS as P	mg/l		14	PERCENT SURVIVAL OF FISH IN UNDILUTED WASTEWATER	%	
8	HYDROCARBONS IN GREASE	mg/l					

15 TOTAL IDENTIFIABLE CHLORINATED HYDROCARBONS

DDT	mg/l		CHLORDANE	mg/l	
DDD	mg/l		ENDRIN	mg/l	
DDE	mg/l		HEPTACHLOR	mg/l	
ALDRIN	mg/l		LINDANE	mg/l	
BHC	mg/l		DIELDRIN	mg/l	
POLYCHLORINATED BIPHENYL	mg/l		OTHER	mg/l	
			TOTAL	mg/l	

16 RADIOACTIVITY pCi/l

(ANALYZE ONLY IF YOU USE RADIOACTIVE MATERIALS IN YOUR PROCESSES)

IDENTIFY _____

_____

_____

E METALS

FILL IN EACH BOX WITH THE CONCENTRATION PRESENT IN THE COMPOSITE SAMPLE EXPRESSED IN MILLIGRAMS PER LITER

GROUP I

1	ARSENIC (0.01)		4	COPPER (0.2)		7	NICKEL (0.1)	
2	CADMIUM (0.02)		5	LEAD (0.1)		8	SILVER (0.02)	
3	TOTAL CHROMIUM (0.005)		6	MERCURY (0.001)		9	ZINC (0.3)	

METHOD OF ANALYSIS FOR THESE CONSTITUENTS MUST BE ABLE TO DETECT, AS A MINIMUM, AT LEAST THE CONCENTRATION SHOWN. SPECIFY LEAST CONCENTRATION DETECTABLE BY THE METHOD USED ON A SEPARATE SHEET.

GROUP II

TEST BY SEMIQUANTITATIVE SPECTROGRAPHIC ANALYSIS

1	ALUMINUM		9	IRON		17	STRONTIUM	
2	ANTIMONY		10	MAGNESIUM		18	THALLIUM	
3	BARIUM		11	MANGANESE		19	TIN	
4	BERYLLIUM		12	MOLYBDENUM		20	TITANIUM	
5	BISMUTH		13	POTASSIUM		21	VANADIUM	
6	BORON		14	SELENIUM		22	ZIRCONIUM	
7	CALCIUM		15	SILICON				
8	COBALT		16	SODIUM				

REFERRING TO D AND E ABOVE:

DATE SAMPLE TAKEN _____

ESTIMATE DISCHARGE TO SEWER THAT DAY

_____ GALLONS

DO YOU CONSIDER THIS SAMPLE:

☐ TYPICAL ☐ WEAKER THAN NORMAL ☐ STRONGER THAN NORMAL

SPECIAL REMARKS:

_____

_____

_____

_____

I CERTIFY THAT THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF MY KNOWLEDGE.

SIGNED BY _____

TITLE _____ DATE: _____

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS

BUREAU OF
ENGINEERING

351 CITY HALL
SAN FRANCISCO 2,
CALIFORNIA

SUBJECT: Industrial Waste
pH Violation

8.5.3

Gentlemen:

Review of your submitted Industrial Waste Discharge Report indicates that you are in violation of the 5.5 minimum to 8.5 maximum allowable pH limitation on waste discharge.

Correction of your pH problem can be easily resolved by the control of acid or base in the waste. Thus, the remedial action can be accomplished without delay.

You are hereby requested to take immediate corrective action towards bringing the pH of your waste within the limits set forth in the Industrial Waste Ordinance and to inform us within two weeks of the date of this letter as to your action on this matter.

Notification of your violation of pH is the first constituent of concern that the City's Industrial Waste enforcement activity has taken on and should not be construed as being necessarily the total violation to the Ordinance.

If you have any questions, please contact Mr. Charles Zurn at 558-3226.

Very truly yours,

Robert C. Levy
City Engineer

The Director has notified Dischargers and other interested persons of his intent to adopt Rules and Regulations by publication in a newspaper of general circulation in the City not less than 10 days prior to the date of the hearing.

The Director, in a public hearing on May 1, 1972, heard and considered all comments pertaining to the Order.

S. M. Tatarian
Director of Public Works

By R. Brooks Larter
Asst. Director, Admin.

CITY AND COUNTY OF SAN FRANCISCO
Department of Public Works

Order No. 91,758

In accordance with Section 123.16 of Article 4.1 of Chapter X, Part II of the San Francisco Municipal Code the following General Rules and Regulations pertaining to the regulation of the quality and quantity of discharges of industrial waste substances are hereby adopted:

Section 3. Classification and Investigation.

Rule 3.1 Classification System. The Director will classify related Industrial Waste Dischargers in appropriate groups identified by Standard Industrial Classification Codes (referred to as SIC group) as found in the Standard Classification Manual, Executive Office of the President/Bureau of the Budget 1967.

Rule 3.2 General Investigation. A general investigation of dischargers in any SIC group may be made for the purpose of determining compliance with prescribed discharge requirements and/or the feasibility of setting waste discharge fees on an industry wide basis in accordance with Section 122.4. For a general investigation of a SIC group, a sufficient number of dischargers, excluding dischargers who use less than 1000 cu ft of water on the average per month, will be selected in descending order of monthly water consumption to provide a representation of at least 50% of known water consumption in such SIC group or 10% of the number of dischargers with usage of 1000 cu ft or more in such SIC group, whichever is the greater. In either case the number of dischargers selected from any SIC group shall not be less than four. The dischargers selected on this basis will be required to file Waste Discharge Reports in accordance with Section 123.3.

Rule 3.3 Group Investigation. A group investigation of dischargers in any SIC group may be made for the purpose of determining compliance with prescribed waste discharge requirements and setting waste discharge fees when there is a possibility of significant variation in composition within the group. For a group investigation all dischargers in the group who use 1000 cu ft of water or more on the average per month will be required to file an Industrial Waste Discharge Report in accordance with Section 123.3.

Rule 3.4 Specific Investigation. A specific investigation will be made requiring any discharger in any SIC group regardless of water usage to file a Waste Discharge Report in accordance with Section 123.3 when the waste characteristics are such that the discharge potentially will not comply with prescribed waste discharge requirements and/or potentially has an unusually high concentration of one or more components for which fees are required, in accordance with Section 122.3.

2. It would be an undue hardship to require every individual restaurant to sample, analyse and report on grease discharge to arrive at an average industry-wide loading figure. The midpoint of the range of 240 - 300 mg/l grease has been selected for loading to correspond to the group c rate for Restaurants established in Section 122.3 of Article 4.1 of the Public Works Code. Individual Dischargers have the right to individual determination of loading at their expense and would be so notified.

3. The Director has notified the Restaurant industry and other interested persons of his intent to adopt rules and regulations pertaining to Restaurants to supplement the provisions of Article 4.1 of the Public Works Code as provided in Section 123.16 of said Article.

4. The Director, in a public hearing on June 28, 1971 heard and considered all comments pertaining to the Order.

S. M. Tatarian
Director of Public Works

By: R. Levy
City Engineer

APPROVED: 28 June, 1971

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS

ORDER NO. 88,916

In accordance with Section 123.16 of Article 4.1 of Chapter X, Part II of the San Francisco Municipal Code (Public Works Code) the following Industrial Waste Rules pertaining to Restaurants are hereby adopted:

Section 2. RESTAURANTS

Rule 2.1 Definition of "Restaurant". The definition of "Restaurant" established in Section 451, sub-sections a through e, of Chapter V, Part II of the San Francisco Municipal Code (Public Health Code) shall apply to Article 4.1 of the Public Works Code and the rules and regulations adopted thereunder.

Rule 2.2 Exemption of Restaurants from payment of fees. A discharger operating an establishment defined as a Restaurant who does not in fact discharge wastes from the preparation or service of food, as intended in Article 4.1 of the Public Works Code, may apply, on forms provided, for exemption from the payment of Industrial Waste Discharge or Annual Inspection Fees. The Discharger may be required to file a Waste Discharge Report or furnish other evidence in support of his request. An exemption will be granted if the request is justified in the judgement of the Director.

Rule 2.3 Restaurant Industrial Waste Discharge Fee per hundred cubic feet of water consumed.

(a) For Restaurants with individual water meters the rate is established as follows:

$0.05/lb grease x (270 mg/l - 59 mg/l) x .00624 x .80 = $0.0527 per hundred cubic feet of water used.

(b) Each Discharger covered by Rule 2.3 shall be notified of his right to demonstrate that he should be exempted from the "Industry-wide" fee established herein and to be subject to the fee schedule set forth for Industrial Waste Discharges in Section 122.3 of Article 4.1 of the Public Works Code.

The basis for action taken includes the following:

1. Article 4.1 of the Public Works Code does not contain a definition of "Restaurant". Therefore, the term is legally defined in the Public Health Code (exerpt attached) since both codes are contained in Part II of the San Francisco Municipal Code. However, this category does include establishments not covered by the intent of part of the Industrial Waste Discharge Regulations and provision for exemption of payment of certain fees must be provided in equity.

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS

ORDER NO. 88,915

It is hereby ordered that:

1. Restaurants are classified as an industry-wide group and shall pay the industry-wide Industrial Waste Discharge Fee established in Section 122.3 of Article 4.1 of Chapter X, Part II of the San Francisco Municipal Code (Public Works Code), relating to the regulation of the quality and quantity of discharges of industrial waste substances;

2. Restaurants shall be notified to pay Industrial Waste Discharge Fees and said fees shall be computed, paid and collected, all in accordance with the provisions of Article 4.1 of the Public Works Code and the Rules and Regulations adopted thereunder;

3. The payment of Fees in accordance with this Order shall not be construed to exempt any Discharger from complying with other provisions of Article 4.1 of the Public Works Code or from complying with other legal requirements established by other ordinances or governmental agencies.

The basis for action taken includes the following:

1. Pertinent sections of Article 4.1 of the Public Works Code including but not limited to the following:

   (a) Section 122.3 establishing a fee schedule for certain permissible discharges wherein the rate for grease set forth in Group e of the Fee schedule is specified for the fee to be charged Restaurants per hundred cubic feet of water used.

   (b) Section 122.4 providing for the determination and application of rates on an industry-wide basis.

2. The Director has notified Restaurants and other interested persons of his intent to classify Restaurants as an industry-wide group and to impose Industrial Waste Discharge Fees on an industry-wide basis.

3. The Director, in a public hearing on June 28, 1971, heard and considered all comments pertaining to the Order.

S. M. Tatarian
Director of Public Works

By: R. Levy
City Engineer

Recommended:
K. Fraschina
K. Fraschina, Supt. WPC

DISTRIBUTION OUTSIDE BUR. WPC

California, Department of Public Health for water quality or sewage work, except that Group II Metals may be analyzed by a non-certified laboratory. For other exceptions see Section 123.3.2(a) of the Industrial Waste Ordinance.

Please submit signed copies of the reporting laboratories data sheets with this report.

The samples analyzed shall be representative of the waste discharge and shall consist of one or more weighted composite samples, collected at suitable locations, and over a representative period. The number of samples to be analyzed and the manner and time of collection must first be approved by the Industrial Waste Section, of this Department within 10 days of the date of this notice.

D. Characteristic Constituent

Item 2. The temperature should be taken at the time of sampling and averaged.

Item 8. To be run on one sample of Section C, on the same day as the sample collected for Section D.

In submitting the report, please use the attached forms. The report is due within 30 days after approval of the sampling and flow measuring procedures.

Please send the report and fee to the Industrial Waste Branch, 1182 Market Street, Room 421, San Francisco, California 94102.

If additional information is needed, please phone Mr. W. W. Kerlin, Industrial Waste Branch at 558-5145.

General Information And Instructions For Completion Of Waste Discharge Report.

A. Organization

Item 5. SIC Code Number: Standard industrial classification number. Enter the number which applies to the activity generating the wastewater discharge sampled for this report. This number may be found in the Standard Industrial Classification Manual, Executive Office of the President / Bureau of Budget 1967, which is available at the Public Library.

B. Activity

Item 1. Describe process, chemicals and raw materials used. Be sure to include such items as detergents, corrosion inhibitors, pesticides, etc. On a separate sheet please include a process flow diagram and a sketch showing your wastes lines and which street sewer they discharge to, and approximate locations of connection to street sewers.

Item 2. San Francisco Water Department reading in hundred cubic feet per day x 748 = gallons per day.

Item 3. One water bill is issued for each account number. List ALL account numbers.

Item 4. Available from water bills.

Item 6. The Waste Discharge Report Fee is based on a rate of $2.00 per hundred cubic feet of water used per month. The water usage is to be based on your records of your average monthly usage for the past 12 months and is to include all sources of water such as City water, wells, bay water etc. The minimum fee is $100 and the maximum fee is $600. (Section 125.2 Industrial Waste Ordinance) Fee is payable to Department of Public Works.

C., D. and E.

The waste discharge analyses are to be made in accordance with the Thirteenth Edition of Standard Methods for the Examination of Water and Wastewater. The analyses shall be made by a laboratory certified by the State of

FILE NO. 207-78-1 ORD. NO. ——

AMENDING THE PUBLIC WORKS CODE BY ADDING ARTICLE 4.1 THERETO RELATING TO THE REGULATION OF THE QUALITY AND QUANTITY OF DISCHARGES OF INDUSTRIAL WASTE SUBSTANCES, INCLUDING, BUT NOT LIMITED TO, LIQUID, SOLID, GASEOUS OR RADIOACTIVE SUBSTANCES RESULTING FROM ANY PRODUCING, MANUFACTURING, PROCESSING, COMMERCIAL OR INDUSTRIAL OPERATION OF WHATEVER NATURE, AS DISTINCT FROM SANITARY SEWAGE. DEFINING INDUSTRIAL WASTES THEREIN, ESTABLISHING PROCEDURES FOR ANALYSES, TESTS, AND MEASUREMENTS, INCLUDING BUT NOT LIMITED TO THOSE PROCEDURES IN THE TWELFTH EDITION OF "STANDARD METHODS FOR THE EXAMINATION OF WATER AND SEWAGE," PUBLISHED JOINTLY BY THE AMERICAN PUBLIC HEALTH ASSOCIATION, THE AMERICAN WATER WORKS ASSOCIATION, AND THE WATER POLLUTION CONTROL FEDERATION. ESTABLISHING PROCEDURES FOR ENFORCEMENT THEREOF, PROVIDING FOR SCHEDULE OF FEES FOR THE DISCHARGE OF WASTES, PROVIDING FOR THE ADMINISTRATION, AND COLLECTION OF SAID FEES, AND PROVIDING FOR CERTAIN OTHER FILING FEES, ESTABLISHING AN INDUSTRIAL WASTE REVIEW BOARD, PROVIDING FOR AN APPEAL PROCEDURE, PROVIDING FOR PENALTIES FOR VIOLATION OF THE PROVISIONS THEREOF; PROVIDING AN EFFECTIVE DATE, AND REPEALING SECTIONS 118 TO AND INCLUDING 140 OF THE PUBLIC WORKS CODE AND PROVIDING FOR A SEVERABILITY CLAUSE AND A SAVINGS CLAUSE.

Be it Ordained by the People of the City and County of San Francisco:

SECTION 1. Part II, Chapter X, of the San Francisco Municipal Code (Public Works Code) is hereby amended by adding Article 4.1 thereto, to read as follows:

ARTICLE 4.1
INDUSTRIAL WASTE DISCHARGE REGULATIONS
DIVISION 1 — GENERAL PROVISIONS

SEC. 118. Purpose of Ordinance. This Ordinance is for the purpose of regulating and controlling the quality and quantity of discharges from producing, manufacturing, processing, commercial or industrial operations in order that the wastes being discharged from these sources shall not adversely affect any of the following to a greater degree than would result from the discharge of sanitary sewage:

(a) the personnel employed in the operation and maintenance of the Sewerage System;
(b) the appurtenances of the Sewerage System;
(c) the cost of operation of the Sewerage System;
(d) the quality of the effluent from the City's Water Pollution Control Plants;
(e) the quality of the receiving waters with respect to any and all requirements that may be established by the Regional Water Quality Control Board for the San Francisco Bay Region, or other authorized Board or Agency.

SEC. 119. Adopting by Reference, Standard Methods for the Examination of Water and Sewage. The Twelfth Edition of "Standard Methods for the Examination of Water and Sewage," published jointly by the American Public Health Association, American Water Works Association, and the Water Pollution Control Federation is hereby adopted by reference for definitions, laboratory procedures of analysis, and tests and measurements, to which reference is made in this article.

SEC. 119.1 Additional Procedures — Authority for Director to Adopt. Where no test or procedure is provided in the "Standard Methods" adopted in Sec. 119, the Director shall establish necessary test procedures pursuant to Sec. 123.16.

SEC. 119.2 Interpretation. In the event of any conflict between a definition provided for in "Standard Methods," and a specific provision in this article, the specific provision of this article shall govern. Appeals on interpretation of any definition in conflict may be made to the Industrial Water Review Board in accordance with established procedures.

SEC. 120. Definitions. For the purpose of this article, the following words and phrases shall mean and include the definitions of the following subsections:

SEC. 120.1 Sanitary Sewage. The water-carried wastes from residences or commercial or industrial establishments contributed solely by reason of human occupancy, excepting wastes from the commercial preparation and dispensing of food a d beverages.

SEC. 120.2 Industrial Waste. Any waste substances, as distinct from sanitary sewage, including but not limited to liquid, solid, gaseous, and radioactive substances resulting from any producing, manufacturing, processing, commercial or industrial operation of whatever nature.

SEC. 120.3 Normal Raw Sewage. The strength, characteristics, and appearance of raw sewage entering the Richmond-Sunset Water Pollution Control Plant.

SEC. 120.4 Order. Department of Public Works order.

SEC. 120.5 Director. The Director of the Department of Public Works of the City and County of San Francisco or a designated representative of the Director.

SEC. 120.6 Person. An individual, firm, partnership, joint venture, association, social club, fraternal organization, joint stock company, corporation, estate, trust, business trust, receiver, trustee, syndicate, or any group or a combination acting as a unit, the United States of America, the State of California and any political subdivision of either thereof, and any public entity organized pursuant to the laws of the State of California.

SEC. 120.7 City. City shall mean the City and County of San Francisco.

SEC. 120.8 Water Department. Water Department shall mean the San Francisco Water Department.

SEC. 120.9 Discharger. The owner of record, the lessee, sublessee, mortgagee in possession, or any person responsible for the process which contributes industrial waste.

SEC. 120.10 Sewerage System. All City-owned facilities for collecting, pumping, treating and disposing of sanitary sewage, industrial wastes, and surface runoff.

SEC. 120.11 Water Pollution Control Plant. Any arrangement of devices and structures used for the treating and disposal of sanitary sewage, industrial wastes, and surface runoff.

SEC. 120.12 Cooling Water. The water discharged from any system of condensation, air conditioning, cooling, refrigeration, or other process from which a discharge of water takes place.

SEC. 120.13 Garbage. Solid wastes from the domestic and commercial preparation, cooking, and dispensing of food, and from the handling storage, and sale of food products.

SEC. 120.14 Property Ground Garbage. The wastes from the preparation, cooking, and dispensing of food which has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in the public sewers of the City and County of San Francisco.

DIVISION 2 — PROHIBITED WASTE DISCHARGES

SEC. 121. Exclusion of Wastes. No person shall discharge, deposit, or throw, or cause, allow or permit to be discharged, deposited or thrown into the City's Sewerage System any substance of any kind whatever tending to obstruct or injure the Sewage System, or cause a nuisance; or which will in any manner interfere with the proper operation, repair or maintenance of the Sewerage System, or will in any way render it difficult for any workmen to repair any part of the Sewage System and shall include, but not be limited to:

(a) Ashes, cinders, sand, gravel, dirt, bark, leaves, grass cuttings and straw, metals, glass, ceramics and plastics, or any other solid or viscous substance capable of causing obstruction to the flow in sewers.
(b) Flammable or explosive substances or any other substances which may interact with other wastes to cause flammable or explosive conditions in the Sewerage System.
(c) Mineral oils, greases or other products of petroleum origin.
(d) Garbage, excepting Properly Ground Garbage from dwellings and restaurants or other establishments engaged in the preparation of foods and beverages intended primarily for immediate consumption.
(e) Any toxic, noxious or malodorous gas or subtance which either singly or by interaction with other wastes, is capable of creating a nuisance or hazard to life and limb or of preventing maintenance of the Sewerage System.

DIVISION 3 — LIMITATIONS ON WASTE DISCHARGES AND FEES THEREFOR

SEC. 122. Limitations on Discharges. The characteristics of any Industrial Waste discharged into the Sewerage System shall not exceed the numerical limits set forth below:

	Limiting Values
(a) pH	5.5 min.; 8.5 max.
(b) Phenols, mg/1	0.5
(c) Dissolved Sulfides, mg/1	0.5
(d) Temperature (except where higher temperatures are required by law)	125° F
(e) Turbidity (Jackson Turbidity Units)	70
(f) Toxicity (96-hour TLm bioassay)	75%

SEC. 122.1 Limitations Based on Normal Raw Sewage. Any substance in any Industrial Waste discharge which, in accordance with Sec. 118, may adversely affect the operation or maintenance of the Sewerage System, or cause the effluent from the City's Water Pollution Control Plants to exceed state or federal regulations and for which no specific limit has been established shall not exceed the concentration of said substance in Normal Raw Sewage.

SEC. 122.2 Radioactive Waste. No person shall discharge or cause to be discharged any radioactive waste into the Sewerage System, except where:
(a) the person is authorized to use radioactive materials by the Atomic Energy Commission or other governmental agency empowered to regulate the use of radioactive materials;
(b) the waste is discharged in strict conformity with Atomic Energy Commission recommendations for safe disposal of radioactive wastes; and
(c) the person discharging the radioactive waste assumes full responsibility for any injury to maintenance or operational personnel or damage to the Sewerage System that may result from such discharge. Any person discharging a radioactive waste to the Sewerage System in accordance with the provisions of the preceding paragraph shall submit to the Director such reports as the Director may deem necessary. In the event of any accidental spill of any radioactive material into the Sewerage System, the person responsible shall immediately, and in the most expeditious manner notify the Director.

SEC. 122.3 Permissible Discharge; Fee Schedule. The following substances in the concentrations indicated may be discharged into the Sewerage System provided that industrial Wastes containing permissible concentrations of these substances are discharged as set forth in the Fee Schedule and one or more composite samples, collected at suitable locations, over a representative period, shall be used to determine the concentration of grease, suspended matter and chemical oxygen demand in the waste discharge into the Sewerage System. The concentrations of these substances shall not exceed the maximum limits set forth in the Fee Schedule, except as exempted hereinafter or unless the Discharger has made application for, and been granted a variance in accordance with the procedures set forth in the article.

The Director, at the variance hearing of the Industrial Waste Review Board on appeal, shall impose an additional charge per day to compensate for the increased cost to the City if a variance is granted.

FEE SCHEDULE

GROUP	GREASE	SUSPENDED MATTER	CHEMICAL OXYGEN DEMAND
a. Domestic Loading Rate:	0-59 mg/1 Min. charge	0-359 mg/1 Min. Charge	0-699 mg/1 Min. Charge
b. Light Loading Rate:	60-119 mg/1 $.03 per lb.	360-449 mg/1 $.025 per lb.	700-899 mg/1 $.015 per lb.
c. Average Loading Rate:	120-179 mg/1 $.04 per lb.	450-529 mg/1 $.025 per lb.	900-1099 mg/1 $.015 per lb.
d. Moderate Loading Rate:	180-239 mg/1 $.045 per lb.	530-619 mg/1 $.025 per lb.	1100-1299 mg/1 $.015 per lb.
e. Heavy Loading Rate:	240-300 mg/1 $.05 per lb.	620-700 mg/1 $.025 per lb.	1300-1500 mg/1 $.015 per lb.
f. Maximum Limit Rate:	300 mg/1	700 mg/1	1500 mg/1
	TO BE DETERMINED AT THE VARIANCE HEARING		

For the purpose of determining the applicable group in the fee schedule, the concentration of substances of the waste discharge will be adjusted by subtracting the domestic loading of group (a) from the Discharger's loading.

The maximum loading limits of 700 mg/1 for Suspended Matter and 1500 mg/1 for Chemical Oxygen Demand will not take effect until July 1, 1973, and thereafter will be imposed on Industrial Waste Dischargers within the area tributary to a treatment plant only when the effluent from that treatment plant is, or in the opinion of the Director threatens to be, in violation of any water quality requirements related to Suspended Matter and Chemical Oxygen Demand imposed on the City.

When loadings in excess of the maximum loadings contained in the foregoing schedule are permitted, surcharges shall be assessed at the same rate established for loadings below the maximum levels established herein.

Milligrams per liter—Conversion. Milligrams per liter shall mean a weight to volume ratio; the milligrams per liter value multiplied by the factor .00624 shall be equivalent to pounds per 100 cubic feet of water consumption.

The charge for each substance being discharged shall be the pounds per 100 cubic feet multiplied by 80% of the gross water consumption multiplied by the applicable rate per pound.

Water consumption shall be the volume of water as metered by the Water Department or where necessary, as estimated by the Director, except where the Discharger demonstrates greater use in his process as set forth in Sec. 123.2 (i).

(j) Providing for rates on industry-wide basis (Section 122.4).

A written notice setting forth the date of the hearing shall be sent to the Discharger by certified mail 30 days in advance of the hearing. When necessary said notice shall include a copy of the staff report and recommended action and shall advise the Discharger that he may submit evidence at the hearing. In the event that the Director deems it necessary to hold a public hearing in order to determine the applicable industrial waste discharge rates on an industry-wide basis, notice shall be given by publication in a newspaper of general circulation in the City for at least 2 days, not less than ten days prior to the date of the hearing.

SEC. 123.3 Waste Discharge Report. When required by the Director, a Discharger shall complete and file with the Director, within 30 days after written notification, a Waste Discharge Report on forms furnished by the Director and shall pay the Waste Discharge Report Fee as set forth in Section 125.2 Schedule of Fees. On written request, the Director may extend the time for filing an additional 30 days. Further extensions of time may only be granted by the Director at a public hearing. The Waste Discharge Report shall include, but not be limited to, materials used, nature of the process, volume, rates of flow, substances and concentrations in the waste discharge. The foregoing examples are in explanation and not in limitation of the information which the Director may require. A Waste Discharge Report shall be filed whenever a process change causes a substantial change in the waste being discharged or when requested by the Director; however in the latter case a Waste Discharge Report will not be required more frequently than every two years. If the Discharger fails to file a Waste Discharge Report, the Director, after a public hearing, may take action as set forth in Section 126.4, Abatement of Discharge.

SEC. 123.3.1 Disclosure of Information. It is unlawful for the Director or any person having an administrative duty under this Article to make known in any manner whatever the business affairs, operations, or information obtained by an investigation of records and equipment of any operator or any other person visited or examined in the discharge of official duty, or the amount or source of income, profits, losses, expenditures or any particulars thereof to be seen or examined by any person.

SEC. 123.3.2 Sampling and Analysis Program and Sampling Facility. The Director may require the Discharger to conduct a sampling and analysis program of a frequency and type stipulated by the Director to demonstrate compliance with prescribed waste discharge requirements. The Discharger may either:

(a) Conduct his own sampling and analysis program provided he demonstrates to the Director that he has the necessary qualifications and facilities to perform the work; or

(b) engage a private consulting firm or laboratory, certified by the State of California, Department of Public Health, for water quality or sewage work.

The Director may require a Discharger to construct, at the Discharger's expense, a sampling facility on the side sewer in the street or sidewalk area with necessary related measuring and sampling equipment, in accordance with current City standards. The construction shall be completed within the time set forth in the time schedule.

SEC. 123.3.3 Monitoring of Waste Discharges. If required by the Director, the quantity and quality of waste discharged shall be monitored by the Discharger as set forth in Sec. 123.3.2 at the Discharger's expense and the results thereof submitted to the Director. The Discharger shall pay an annual Self-Monitoring Program Review Fee as set forth in Section 125.2

SEC. 123.3.4 Monitoring of Waste Discharges by Other Agencies. If required by the Director, the quality and quantity of waste from governmental agencies being discharged into the Sewerage System by agreement with the City shall be sampled at certain specified locations prior to the discharge into the Sewerage System.

SEC. 123.4 Right to Enter Premises. Upon showing proper credentials, persons authorized by the Director, when necessary for the performance of their duties, shall have the right to enter the Discharger's premises.

SEC. 123.5 Reimbursement for City's Additional Costs. The Director may enter into an agreement with the Discharger whereby the Discharger shall reimburse the City for additional cost of treatment, pumping, maintenance of the Sewerage System, administration, penalties imposed by enforcement agencies and incidental expenses resulting from his discharge other than as provided in Section 122.3.

SEC. 123.6. Variances.

(a) General. The Director shall hear and make determinations regarding applications for variances from the strict application of standards in this Article. He shall have power to grant only such variances as may be in harmony with the general purpose and intent of this Article and in accordance with the general and specific rules contained herein, necessary to overcome such practical difficulty or unnecessary hardship as may be created by the provisions of this Article. No variance shall be granted in whole or in part which would adversely affect to a greater degree than would result from the discharge of Normal Raw Sewage, the purposes set forth in Section 118 (a), (b), (d) and (e).

(b) Initiation. A variance action may be initiated by application of the Discharger or his authorized agent.

(c) Determination. No variance shall be granted in whole or in part unless there exist facts sufficient to establish that the discharge of such Industrial Waste into a sewer would be safe and not injurious to persons and property. In granting any variance as provided herein, the Director or the Board on appeal, shall specify the character and extent thereof, and shall also prescribe such conditions as are necessary to secure the objectives of this Article.

(d) Content of Applications. The content of applications shall be in accordance with the policies, rules and regulations of the Department of Public Works. All applications shall be upon forms prescribed therefor, and shall contain or be accompanied by all information required to assure the presentation of pertinent facts for proper consideration and for the permanent record.

(e) Revocation. The Director, after a public hearing and after the time schedule established, shall revoke such variance when he finds that conditions have changed and a continuance of the variance would adversely affect the standards provided in Sections 118, 122, 122.1, and 122.2.

SEC. 123.7 Notice of Violation. Whenever the Director finds the discharge of the Industrial Waste is, or threatens to become, a violation of established requirements, he shall issue an Order specifying violations, or threatened violations, and ordering compliance within the time schedule specified therein.

SEC. 123.8 Time Schedule. In considering the time schedule, the Director will give consideration to: (a) the severity of the violation in terms of the effect of the discharge upon the Sewerage System; (b) economic factors including the relative cost of remedial measures required to achieve compliance within different time intervals, and (c) time required to construct any improvement required to effect compliance.

SEC. 123.9 Progress Reports. The Director may require the Discharger to submit periodic progress reports on the corrective work.

SEC. 123.10 Extension of Time. A Discharger may request an extension of time for compliance from the Director. The request shall be made in writing and will be considered at a public hearing.

SEC. 123.11 Permits. The Discharger before commencing or proceeding with any construction, alteration or operation, shall obtain all permits required by law for the construction or installation of sampling facilities or corrective facilities, or operation permits. Such permits may include, but are not limited to, excavation, plumbing, building, electrical or public health.

SEC. 123.12 Notice of Hearing. A written notice setting forth the date of the hearing shall be sent to the Discharger by certified mail 30 days in advance of the hearing. The notice shall advise the Discharger that he will be afforded an opportunity to present at the hearing reasons why an Order should not be passed.

SEC. 123.13 Passing of the Order. At the conclusion of the hearing the Director may pass an Order for compliance. Said Order shall become effective 10 days after date of mailing.

SEC. 123.14 Appeals of Orders and Variances. A period of 10 days will be allowed after the date of the Order within which time the Discharger may appeal the action of the Director to the Industrial Waste Review Board.

SEC. 123.15 Serious and Immediate Hazards. Notwithstanding the provisions of any other section of this Article, whenever in the judgment of the Director it appears that a waste discharge is causing any condition constituting a hazard to the life, health or safety of any person, or to the Sewerage System, the Director is empowered to hold a hearing within 48 hours.

SEC. 123.16 Director May Adopt Rules and Regulations. After a public hearing the Director may adopt rules and regulations supplemental to this Article and not in conflict with the intent therewith provided they are generally accepted or in conformity with requirements set by other agencies. These are subject to re-examination and change if at any time such rules and regulations are found to be not in conformance with the intent or requirements of this Article.

DIVISION 5—INDUSTRIAL WASTE REVIEW BOARD

SEC. 124. Industrial Waste Review Board. There is hereby created an Industrial Waste Review Board which shall consist of five members who are not employed in any public agency and who are knowledgeable of or engaged in activities related to water pollution abatement. Membership of the Board shall be selected from qualified persons who have had no less than five years of professional experience relating to water pollution abatement in the disciplines of Mechanical Engineering, Civil Engineering with Sanitary Engineering experience, Chemical Engineering, Chemistry, Marine Biology, or instruction at University level in the field of Engineering or Science. Members of the Board will serve on a call on a per diem basis. The Chief Administrative Officer will appoint the five members for a four-year term, provided that the initial appointments of two members shall be for a two-year period, two members for a three-year period and one member for a four-year period. Succeeding four-year appointments shall be made at the expiration of the initial appointments. The members so chosen will be the voting members of the Board. The City Engineer and Superintendent, Bureau of Water Pollution Control, or their designated representatives shall be ex-officio members of the Board, participating in the deliberations of the Board without vote or compensation. The Director shall appoint a member of his staff to act as secretary of the Board.

SEC. 124.1 Compensation. Members of the Board shall receive compensation of $50 for each four-hour period, or a fraction thereof, that the Board is convened.

SEC. 124.2 Quorum. Three voting members of the Board shall constitute a quorum. Any action of the Board shall require three concurring votes.

SEC. 124.3 Powers of the Board. The Board shall have the power to hear and decide appeals from actions of the Director. Upon hearing of any appeal taken pursuant to this Section, the Board may, subject to the same limitations as are placed upon the Director by this Article, approve, disapprove or modify the decision appealed from, in conformity with the following requirements:

(a) In the case of a variance application, the Board shall specify in its findings, as part of a written decision, facts sufficient to establish wherein the application meets or does not meet, as the case may be, the requirements set forth in Section 123.6, and, if the requirements are deemed to be met, the Board shall prescribe the details and conditions of the variance.

(b) In the case of any order, requirement, decision of the Director, other than a variance, if the determination of the Board differs from that of the Director, it shall, in a written decision, specify wherein there was error in interpretation of the provisions of this Article, abuse of discretion on the part of the Director, or other basis for revision and shall specify in its findings, as part of such written decision, the facts relied upon in arriving at its determination.

SEC. 124.4 Request for Review by Board.

(a) General. A Discharger may file an appeal from the Director's Order by requesting a review by the Board. Upon receipt of the request and the deposit of the fee specified in Section 125.1, the secretary of the Board shall schedule the request for hearing.

(b) Notice of Appeal. Any appeal under this section shall be taken by filing written notice of appeal with the Board within 10 days after the date of the Order of the Director.

(c) Contents. Any notice of appeal, filed pursuant to this section shall set forth specifically wherein it is alleged that there was error in interpretation of the provisions of this Article or abuse of discretion on the part of the Director.

(d) Hearing. The procedure and requirements for the transmittal of the record notice of hearing, and hearing in connection with any appeal under this Section shall be prescribed by the Board.

SEC. 124.5 Hearing Procedure. Hearings by the Board shall be held at the call of the secretary of the Board and at such times as the Board may determine and shall be conducted in accordance with the following procedure:

(a) The date of the hearing shall be not less than one week nor more than four weeks after receipt of appeal by the secretary of the Board.

(b) The Director will present the evidence and the proceedings of this hearing and state the action he recommends. The Discharger may present any information which might influence the decision. The Director will indicate whether or not he wishes to modify his recommendation in view of additional information submitted by the Discharger.

(c) The Board must make a final decision within 90 days from the date of filing the Notice of Appeal, and shall communicate its decision to the Director and Discharger in writing. No response from the Board within 90 days will constitute automatic approval of the Director's recommendations.

(d) The Board shall designate a competent phonographic reporter as official reporter of the Board. The reporter shall attend all hearings of the Board and shall take down by phonographic report all testimony, the objections made, the rulings of the Board, and all statements and remarks made, oral instructions given by the Board and the voting on all cases heard by the Board. The fees for the reporter for reporting all of the proceedings and testimony as outlined above shall be a legal charge against the City and County of San Francisco. When requested to do so by any party or parties in writing, the official reporter must, within a reasonable time after the request has been made, transcribe

such specific portions as may be requested and certify to the same as being correctly reported and transcribed. A copy of the transcript shall also be furnished the Director. The fees for such transcriptions shall be at the expense of the party requesting the transcript thereof and the fees shall be as prescribed by Government Code Section 69950.

DIVISION 6 — FEES AND REIMBURSEMENTS

SEC. 125. Payment of Fees and Reimbursements. All fees and reimbursements shall be payable to the City and shall be delivered to the Department of Public Works, Central Permit Bureau.

SEC. 125.1 Description of Fees.

(a) Waste Discharge Report Fee. A fee, which must accompany the Waste Discharge Report, for the cost of the City's investigation and processing of the Report.

(b) Industrial Waste Review Board Filing Fee A fee of $200 must accompany any appeal from the Director's Order.

(c) Self-Monitoring Program Review Fee. An annual fee, to be paid by those Dischargers who have been requested to maintain a self-monitoring program, to defray the administrative and other costs of reviewing the Discharger's self-monitoring reports.

(d) Industrial Waste Inspection Fee. An annual fee to be paid by all Dischargers except those who have been requested to maintain a self-monitoring program, to defray the administrative and other costs of the City's industrial waste program.

SEC. 125.2 Schedule of Fees.

Type of Fee	5000 cu. ft. or less/per month	30,000 cu. ft. or more/per month
a) Waste Discharge Report Fee	$100	$600
b) Self-Monitoring Program Review Fee	25	150
c) Industrial Waste Inspection Fee	10	60

For any amount of monthly water consumption between 5,000 cubic feet and 30,000 cubic feet, the fee will be increased over the minimum in direct portion to the amount of additional water consumption over 5,000 cubic feet.

DIVISION 7 — PENALTIES, ENFORCEMENT SEVERABILITY

SEC. 126. Accidental Discharge. The accidental discharge of any waste that reaches the Sewerage System shall be reported to the Director by the Discharger immediately and in the most expeditious manner. Although no penalty, as such, will be levied as a result of such accidental discharge, it shall be understood that the Discharger shall not be relieved of his responsibilities and shall be liable for any expense, loss or damage occasioned the City by reason of such accidental discharge. A discharge from the same source occurring more than twice per year shall not be considered accidental.

SEC. 126.1 Damage to Sewerage System. No Person shall maliciously, wilfully, or negligently break, damage, destroy, deface, or tamper with any structure, appurtenance, or equipment which is a part of the Sewerage System. Any Person violating this provision shall be subject to immediate arrest under charge of disorderly conduct.

SEC. 126.2 Penalty for Violations. Any Person, the owner or his authorized agent, who violates, disobeys, omits, neglects, or refuses to comply with, or who resists or opposes the execution of the provisions of this Article, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding five hundred dollars ($500.00), or by imprisonment, unless otherwise provided in this Article, and shall be deemed guilty of a separate offense for each day such violation, disobedience, omission, neglect or refusal shall continue. Any Person who shall do any work in violation of any of the provisions of this Article, and any Person having charge of such work who shall permit it to be done, shall be liable to the penalty provided.

SEC. 126.3 Wilful Violation. Any Discharger, purposely dumping pollutants or diluting waste discharged into the City's Sewerage System in an attempt to avoid the intent of this Industrial Waste ordinance, shall be considered in wilful violation of the ordinance and shall be subject to a fine and imprisonment for each violation. Each day in which violation shall continue shall be deemed a separate offense.

SEC. 126.4 Abatement of Discharge. Exclusive of the civil and penal remedies provided in Sections 126.2 and 126.3, when in the judgment of the Director, the Discharger has not demonstrated satisfactory progress towards compliance of the Order, by being in violation of the time schedule, including any stipulated intermediate schedules towards full compliance, the Director is authorized after written notice to the Discharger by certified mail 30 days in advance of such action, to sever or plug the connection from the Discharger's side sewer to the Sewerage System or cause the water service to the premises of the Discharger to be shut off.

SEC. 126.5 Supplemental Enforcement Action. The Director may call upon the District Attorney to institute and pursue any necessary legal proceedings in order to enforce the provisions of this Article, the Director of Public Health to abate a public nuisance or health hazard resulting from any discharge, the City Attorney to maintain an action for injunction to abate any discharge or cause the correction or removal of any violation of this Article.

SEC. 126.6 Severability. If any section, subsection, subdivision, paragraph, sentence, clause, or phrase of this Article or any part thereof, is for any reason held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Article or any part thereof. The Board of Supervisors hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause, or phrase thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses, or phrases be declared unconstitutional or invalid or ineffective.

SEC. 126.7 Effective Date. This Article shall become effective upon passage as provided in Section 16 of the Charter except that as to fees imposed by this Article; said fees shall become operative and be imposed on July 1, 1971.

SECTION 2. Commencing with Sections 118 to and including Section 140, of Article 4, Part II, Chapter X of the San Francisco Municipal Code (Public Works Code) is hereby repealed.

SECTION 3. Nothing contained in this or the preceding sections shall be construed as abating any action now pending under or by virtue of any ordinance of the City herein repealed; or as discontinuing, abating, modifying or altering any penalties accruing, or to accrue, or as waiving any right of the City under any ordinance regulating in force at the time of passage of this ordinance.

I hereby certify that the foregoing ordinance was passed for second reading by the Board of Supervisors of the City and County of San Francisco at its meeting of Jan. 18, 1971.

ROBERT J. DOLAN, Clerk

Jan. 23, 1971—1t

The charges will be calculated for each substance discharged and the monthly Industrial Waste charge shall be the total of 100% of the highest substance charge, 50% of the next highest substance charge, and 25% of the lowest substance charge computed from Fee Schedule in Sec. 122.3.

The charge to restaurants per 100 cubic feet of water used will only be the rate for grease as set forth in Group e.

The minimum industrial waste discharge fee for each monthly billing period is to be $2.00.

SEC. 122.4 Authority to Set Rates on Industry-Wide Basis. The Director may, after a public hearing, determine the applicable rates for Industrial Waste Discharges on an industry-wide basis. The decision of the Director shall be final 30 days after filing his written decision setting the rates for the discharges on an industry-wide basis. When an industry-wide rate has been determined by the Director, and any appeal to the Industrial Waste Review Board, hereinafter referred to as the "Board" and consisting of members as set forth under Section 124, therefrom has become final, the rate schedule shall be applicable to all within that group. The Board shall not accept nor hear a second appeal from an individual Discharger within one year unless or until a declaration is filed by the Discharger showing that he has installed a pre-treatment facility, or made other substantial changes. An individual discharger may demonstrate that he should be exempted from the "industry-wide fee" and be subject thereto to the fee schedule set forth for Industrial Waste Discharges.

SEC. 122.5 Authority to Assess Additional Charges for Impairment to the Sewerage System Caused by the Discharge of Industrial Waste. When the discharge of an industrial waste causes an obstruction, damage or other impairment to the Sewerage System, the Director may either assess a charge against the Discharger for the work required to clean or repair the facility and/or impose a higher appropriate rate for the substance discharged.

SEC. 122.6 Authority to Limit Quantity of Discharge. The Director may limit the quantity of any discharge if he finds that the capacity of any part of the Sewerage System would be overtaxed by the discharge, or the quantity would impose a disportionate cost to the operation of the Sewerage System. The provisions of this section shall apply to Cooling Water, or other discharges from building heating, cooling or air conditioning systems or in cases of the use of dilution water to reduce the concentration of the waste.

DIVISION 4—ADMINISTRATIVE PROVISIONS

SEC. 123. Establishment of a Special Fund to be Known as the Industrial Waste Fund; Purposes Thereof; Authorizing Appropriations Therefrom. There is hereby established a special fund for the purpose of receiving fees as set forth in Sections 122.3 and 122.4 and 122.5, collected for the discharge of wastes from producing, manufacturing, processing, or commercial or industrial operation.

All monies collected and deposited in this special fund shall be used solely for the following purposes:

(1) Administrative expenses for the billing and collection of fees;

(2) Maintenance and operation, including equipment for characterizing industrial waste, of the water pollution control programs.

In the accomplishment of the above purposes it is the intent of the Board of Supervisors to use the funds collected as a supplement to the funds appropriated for the maintenance and operation of the water pollution control programs.

The expenditures from said fund for the purposes specified above shall be made upon the recommendation of the Director of Public Works and approval of the Chief Administrative Officer in accordance with the fiscal provisions of the Charter, and the Controller is hereby authorized and directed to approve said expenditures and the said expenditures are hereby appropriated in accordance with the provisions set forth above.

SEC. 123.1 Fees, Collection Thereof. Penalties Imposed for Failure to Pay. The fees imposed by this article, except delinquency penalty fees, shall be collected from the Discharger by the Water Department. The amount collected shall be transmitted to the Treasurer for deposit to the credit of the Special Fund. The fees shall be collected insofar as practicable at the same time as and along with the collection of charges made in accordance with the regular billing practice of the Water Department. The collection of the fee from a Discharger shall commence with the beginning of the first regular billing period applicable to that person after the effective date of this article. Any fee required to be paid by a Discharger required to be remitted to the Water Department shall be deemed a debt owed to the City. Any person owing money to the City under the provision of this article shall be liable to action brought in the name of the City and County for the recover of such amount.

Fees which are not remitted to the Water Department on or before the due dates are delinquent.

Failure by a Discharger to pay any fees herein imposed shall result in the following interest and penalties on the Discharger.

(1) Any Discharger who fails to pay any fee imposed by this article within one hundred and twenty (120) days of the date of the receipt of notice of fees due from the Water Department shall pay a penalty of ten percent (10%) of the amount of the fee.

(2) Any Discharger who fails to pay any delinquent fees on or before a period of one hundred and eighty (180) days of the date of the receipt of notice of fees due from the Water Department shall pay a second delinquency penalty of ten percent (10%) of the amount of the fee and the ten percent (10%) penalty first imposed.

(3) In addition to the penalties imposed in this section, any Discharger who fails to pay any fee imposed by this article, shall pay interest at the rate of six percent (6%) per annum, exclusive of penalties, from the date on which the fees first became delinquent until paid, and a collection charge of ten dollars ($10.00) for each delinquent account.

(4) Every penalty imposed upon a Discharger and such interest as accrues, under the provision of this section, shall become a part of the fees required to be paid.

(5) The procedure for collection of penalties, interest and collection charges imposed in this section shall be determined by the City.

SEC. 123.2 Director's Hearings. The Director shall hold a public hearing for the purpose of passing a Departmental Order requiring any Discharger to comply with the provisions of this article, including, but not limited to the following:

(a) Establishing discharge requirements (Sec. 122.1).

(b) Imposing limitation on quantity of discharge (Sec. 122.6).

(c) Establishing self-monitoring and sampling schedules and facilities; provided these items may be excluded from the hearing if the Discharger agrees in writing to conduct a program satisfactory to the Director (Sec. 123.3.2 and 123.3.3)

(d) Providing for requirement for additional costs (Section 123.5)

(e) Granting variances (Section 123.6).

(f) Establishing time schedules (Section 123.8).

(g) Allowing extensions of time for compliance (Section 123.10).

(h) Providing for the assessment of additional charges for cleaning or repair (Section 122.5).

(i) Providing for the adjustment of fees where less than 80% of the metered water used is discharged into the sewer.

APPENDIX B
(BOND SEPARATELY)

APPENDIX C

REV6/15/73

DEPARTMENT OF PUBLIC WORKS
DIVISION OF SANITARY ENGINEERING
WASTE INSPECTION FILE
GENERAL MAINTENANCE FORM

DATE _____

SUBMITTED BY _____

ACCOUNT NUMBER (1–9)	CHG (10)	TYP (11)
– –		M

ROUTINE (12–14): 0 3 0

NPW (15)	BAL WDR (16)	WDR (17)	WDR DATE (18–23)	HER (24)	HEARING DATE (25–30)	CON (31)	DIS (32)	VAR (33)	(34)	A/R (35)	SIC ACCOUNT NUMBER (36–44)
			/ /		/ /						– –

WATER DEPT ID NUMBER (45–52)	DST (53)	CLA (54)	DATE ESTABLISHED (55–60)	DATE CHANGE (61–65)
– –			/ /	

ROUTINE (12–14): 0 4 0

OWNERS NAME (15–44)

MAILING ADDRESS-STREET (45–74)

ROUTINE (12–14): 0 4 1

MAILING ADDRESS-CITY AND STATE (15–39)	ZIP (40–44)

BUSINESS NAME (45–74)

ROUTINE (12–14): 0 4 2

BUSINESS LOCATION (15–44)

ROUTINE (12–14): 0 5 0

WATER CONSUMPTION (15–22)	WDR FACTOR (23–27)	GREASE (28–33)	SUSPENDED SOLIDS (34–39)	CHEMICAL OXYGEN (40–45)

ROUTINE (12–14): 0 6 0

WDR FEE (15–20)	FILING FEE (21–25)	PERCENT (26–28)

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC HEALTH

BUREAU OF ENVIRONMENTAL HEALTH SERVICES

APPLICATION FOR PERMIT TO OPERATE OR CERTIFICATE OF SANITATION

Date of Application:

pe of Business

CATION	TRADE NAME BUS. TEL. NO.
Permit to be issued in name(s) of, or if Corporation Specify Corporation name and list principal Officers. (Print)	Home Address and Home Tel. No. (Print)

☐ Sole Owner ☐ Partnership List all names ☐ Corporation List names of Officers ☐ Ownership Change ☐ New Installation ☐ Reclassification ☐ Record Purpose

OPOSED OPERATIONS:
☐ Retail ☐ Wholesale ☐ Manufacturing and/or Processing

PREVIOUS TRADE NAME AND OWNER(S) IF KNOWN:

ating capacity ____ No. of Employees, Inc. working Owner ____ Men ____ Women ____ No. of Toilet Facilities Men ____ Women ____

*** SIGNATURE(S) OF APPLICANT(S)**

* *Partnership, all partners must sign. If Corporation, authorized Officer must sign*

Taken By:

FOR OFFICE USE ONLY

ecial Notes

ling Fee ____ Advertising and Posting Fee ____ Fire Department Referral ____

oning Referral ____ DPW Referral ____ Out of Business Notification ____

INSPECTOR'S REPORT

To the Director of Public Health –

After having made a careful inspection in the above case on ____, 19 ____

I RECOMMEND the issuance of a New Permit to operate ☐

I DISAPPROVE the issuance of a New Permit to operate ☐ for the following reasons:

PRINCIPAL INSPECTOR ____ INSPECTOR

STRICT NO.	CENSUS TRACT	PERMIT NO.	TYPE OF PERMIT

Industrial Waste Permissable Discharge Fee

Computation Sheet

Name of Discharger _____ SIC ID # _____

Address _____ DISTRICT _____

Steps in Calculating Fee	Waste Discharge Constituents		
	Grease mg/l	Suspended Matter mg/l	Chemical Oxygen Demand mg/l
(a) Weighted Average Discharge Loading (by Flow)			
(b) Subtract Domestic Loading (Ord. Sec. 122.3)	59	359	699
(c) Net Industry Discharge Loading			
(d) Constituent Fee per water unit /(c) x 0.00624 x 0.807 x [applicable Group Rate] (Ord. Sec. 122.3)	$	$	$
(e) 100% Highest Constituent Fee Above	$		
(f) 50% Second Highest Constituent Fee Above	$		
(g) 25% Lowest Constituent Fee Above	$		
(h) Total Constituent Fee per unit of Water (e+f+g)	$		
(i) Assumed Water Consumption in Units 1 Unit = 100 cu. ft.			
(j) Industrial Waste Permissable Discharge Fee = h x i	$		

This monthly industrial waste permissible discharge fee will be included on your San Francisco Water Department billing under the service code of Industrial Waste. In those instances where firms are not presently being billed for water, the San Francisco Water Department will initiate a billing procedure for the Industrial Waste Fee.

CITY AND COUNTY OF SAN FRANCISCO

DEPARTMENT OF PUBLIC WORKS

BUREAU OF
ENGINEERING

351 CITY HALL
SAN FRANCISCO
CALIFORNIA 94102

Gentlemen:

The Board of Supervisors enacted an Industrial Waste Ordinance in January 1971 regulating the quality and quantity of industrial wastes discharged into City sewers.

The Ordinance provides for the collection of an Industrial Waste Inspection Fee, among other fees, from all industrial waste dischargers. The Industrial Waste Inspection Fee will be used to defray the administrative and other costs of the City's Industrial Waste program. Industrial waste is defined in the Ordinance as "any waste substances as distinct from sanitary sewages, including but not limited to liquid, solid, gaseous and radioactive substances resulting from any producing, manufacturing, processing, commercial or industrial operation of whatever nature." A Discharger is any person who contributed to the process that results in an industrial waste discharge.

The Industrial Waste Inspection fee is based on average monthly water consumption in units of a hundred cubic feet. The minimum fee is $10.00 for water consumption of 50 units or less per month. For water consumption above 50 units per month, the fee is $10.00 plus $0.20 for each additional unit. The maximum fee is $60.00 per year.

The first billing under this Ordinance was made in June, 1972 for Fiscal Year 71-72. The Ordinance provides for a system of Penalties, Interest and a Collection charge assessed on accounts not paid within a specified period of time. These penalties increase if not paid.

Our records indicate that you are an industrial waste discharger and have not remitted the Industrial Waste Inspection fee. All fees and penalties that appear on your bill are due and payable immediately. If there are any questions, please phone Mr. Jack Miller at 558-5145.

Your cooperation and early response will assist the City in maintaining an effective and efficient Industrial Waste program and will avoid any further penalties.

Very truly yours,

S. M. TATARIAN
Director of Public Works

by: ROBERT LEVY
City Engineer

USER CHARGE ACTIVITY STATEMENT 1973

PART B SEWER SERVICE CHARGE

Revenue Activity

	1972 TOTAL		1973 JAN. 1 - JUNE 30		1973 JULY 1 - DEC. 30		1973 TOTAL	
S.F.W.D. Net Collections	# N A	$ 7,833,800	# N A	$4,483,400	# N A	$2,898,900	# N A	$7,382,300
Refunds	550	10,400	50	2,200	0	0	50	2,200
Credits	1,200	Approx. 25,000	500	5,900	600	14,000	1,100	19,900
Debits	0	0	1,000	6,300	600	12,700	1,600	19,000

Delinquency Activity

S.F.W.D. Write Off's	0	0	10,100	291,800	7400	102,100	17,500	393,900
Error Adjustments	0	0	50	11,800	100	3,300	150	15,100
Collections Abandoned	0	0	1,400	14,900	1450	22,700	2,850	37,600
Customer Notifications	600	0	4,100		8350		12,450	
	N A	* 1,100	N A	* 1,400				* 1,400
Payments	0	0	250	7,100	1400	26,200	1,650	33,300
S.S.C.Transfers To Tax Collector	0	0	0	0	1100	108,500	1,100	108,500

*Closed a/c's with "o" water balance not transferred by SFWD-Experimental Project.

Office Activity

Phone Calls	15,000	7,200	6400	13,600
Office Visits	750	200	300	500
Letters Rec'd.	2,000	500	400	900
UpdateRequests	2,000	800	700	1,500
Field Inspt.	1,900	70	0	70
			** 240	** 240
EDP Updates	2,000	1,500	1100	2,600
Personnel (Mandays)	1,600	750	600	1,350

** New Construction--not coded for S.S.C. & therefore not billed.

REQUEST FOR SEWER SERVICE CHARGE ADJUSTMENT

- Incorrect Billing -

(Fill in 1-7 for all requests) Form SS113
DSE ID# IB_____

1. Name_____

2. Date_____

3. Initiating Action: Walk-in Letter Phone

4. Applicant's Comments:

   Sewer Service Charge_____Total Bill_____

   Water Dept. Account No._____

   Service Address_____Zip_____Phone_____

   Additional Comments_____

   _____

   _____

5. Mailing Address_____Zip_____Phone_____

6. City_____

7. Classification on Water Bill (circle one) C. R. E. Other

8. OFFICE INFORMATION

   Bill: Paid Unpaid

   METER SIZE_____

   AMOUNT BILLED $_____

   CORRECTED BILL $_____

   ADJUSTMENT $_____Credit Refund

   Date Issued_____

   By_____

9. Refund Information

   Amount Paid by Customer $_____

   Verified By_____Date_____

   Amount customer should have paid $_____Refund Due $_____

   Refund check request sent to Controller Date_____By_____

FORM SS 116 (5/4/3)

NOTICE OF SEWER SERVICE CHARGE DELINQUENCY

Charges for sewer service against your water service as set forth on the attached tabulation are now more than 180 days overdue. In accordance with City Ordinances these delinquent charges will be transmitted to the Bureau of Delinquent Revenue Collection for appropriate legal proceedings unless we receive the payment indicated on the attached sheet within two (2) weeks of the date of this notice. Checks or money orders for such payments should be made payable to the City and County of San Francisco, D.P.W. and mailed to:

Sewer Service Charge Section
Department of Public Works
770 Golden Gate Avenue
San Francisco, California 94102

(Do not send cash. Please mark your Water Department Account Number on your check or money order.)

A review of the correctness of any billing can be obtained by phoning the Sewer Service Charge Section at 558-2171 with your bill at hand. If the billing should be found to be in error, a corrected billing can be prepared based on your telephone call.

After this two-week period, the delinquent listing will be processed to the Bureau of Delinquent Revenue Collection and payment to the Department of Public Works without penalties and interest will no longer be possible.

Robert C. Levy
City Engineer

USER CHARGE SECTION
DEPARTMENT OF PUBLIC WORKS
770 GOLDEN GATE AVENUE, 2ND FLOOR
SAN FRANCISCO, CALIF. 94102

DATE:

FINAL NOTICE OF DELINQUENT SEWER SERVICE CHARGE

Water Department Account No. _____ Closed ☐

Name: _____

Mailing Address: _____ Zip: _____

Service Address: _____

Sewer Service Charge Delinquent Amount. $_____
(Pay only this amount if delinquent amount is paid within 2 weeks).

10% Penalty for first 120 days $

Total $

10% Penalty after 180 days $

Total $

6% Annual Interest (180 Days 3%) $

Collection Charge per Ordinance $

Total Delinquency Due & Payable $_____

Payment Received $ _____ By _____

Date Charge appeared on Water Bill _____

Date listed as delinquent by WD. (120 Day Billing Cycle) _____

Date received by SSC (180 Day Printout) _____

Bimonthly Account unless checked ☐

Recommendation to Tax Collector: Payment of the above Sewer Service Charge Delinquency has not been received within the 14 days allowed. Departmental collection efforts are therefore terminated and we request that you prosecute the collection of this service charge with ordained penalties and interest.

R. C. Levy
City Engineer

By: _____ Date: _____

7. C.C.S.F. Industrial Waste Program Dec 1973

A. CCSF DPW.

S. Industrial Waste: CCSF Annual Report